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Educational News and Editorial Comment

THE COST OF AMERICAN SCHOOLS

The following summary of a recent financial survey of education is quoted from the *New York Times*.

Expenditures for public grammar and high schools in the United States have been multiplied by seven since 1900, while the population has increased only by one-half, according to the National Industrial Conference Board, 247 Park Avenue, New York City.

While the tremendous leap in public appropriations represents in large part the decrease in the purchasing power of a dollar, it also represents a considerable extension of the public-school system and an improvement in its work, the board says. The higher appropriations go partly to larger salaries for teachers and considerably to the increased cost of equipping and maintaining schools. The board estimates that the actual increase in expenditure per capita in public education was about 200 per cent from 1900 to 1924, the last year on which national statistics are available.

The nation's annual budget for grammar and high schools in 1900 was $214,965,000. In 1924 it was $1,820,743,000, an increase of 747 per cent. The expenditure per capita was $2.83 in 1900. It was $16.25 in 1924, a rise of 474 per cent, which the board has cut to 200 per cent in its estimate of a real increase after discounting the shrinkage in dollar value.

The leaders in expenditure and also in results, the board says, are states of the Pacific, middle western, and Rocky Mountain area. California ranks first. In 1924 it spent $159.35 per child of school age, that is, from five to seventeen

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years old. The second highest amount was spent by Nevada, with $129.90; the third by Wyoming, $106.23.

The board notes that, in dividing the forty-eight states into three groups of equal number according to high or low expenditure, the highest group will be found to contain Colorado, with $90.94 per capita; Minnesota, $86.48; South Dakota, $84.47; Oregon, $84.33; Washington, $81.25; Iowa, $79.77; North Dakota, $77.42; Arizona, $76.65; and Nebraska, $75.57.

New York ranks highest in expenditure per capita among the eastern, highly industrialized states and fourth among all states. Its expenditure is $97.50. The board says it ranks equally high in results. New Jersey with $93.76, Ohio with $86.88, and Michigan with $86.74 are also in the top group.

A statement of the same general import was recently issued by the Bureau of the Census of the Department of Commerce. The full text of the official document is as follows:

The Department of Commerce announces a summary of the expenditures and indebtedness for public schools in the 247 cities having a population of over 30,000 for the fiscal year 1925.

These statistics include only those for the public schools under the supervision of the city corporation or of the independent school district practically coextensive with the city corporation. The total population of these cities represents 35.3 per cent of the entire population of continental United States.

The payments for the operation and maintenance of the city schools for 1925 amounted to $571,827,138, the cost per person in these 247 cities being $14.03, and representing 37.5 per cent of the expenditures for the maintenance and operation of all general departments of the cities. "General departments," as the term is here used, do not include public-service enterprises, such as waterworks, electric-light plants, or similar public-service utilities.

The above payments do not include interest paid on bonds issued for school buildings, which, at 4½ per cent, would amount to approximately $39,000,000, so that the per capita payments for school operation, maintenance, and interest for 1925 in these cities were approximately $15, while the corresponding payments for 1915 were only $6.08 per capita.

For 146 cities covered by the reports of the department from 1905 to 1925, the cost of operation and maintenance of all general departments has increased, but the cost of schools has increased at a much greater rate than that for other general departments. The increase in cost of operation and maintenance for schools was 85.3 per cent from 1905 to 1915 and 209.4 per cent from 1915 to 1925, while that for other general departments was 77.2 per cent from 1905 to 1915 and 127.0 per cent from 1915 to 1925.

For 1925 there was expended in outlays for permanent improvements for schools $206,908,813. This represented 26.8 per cent of the total outlays for permanent improvements in all departments and exceeded those reported for

any other single department except that of highway construction (trees, roads, etc.), for which the outlays amounted to $317,498,333 in 1925. In all classes of cities the outlays for schools formed a much larger percentage of the total outlays in 1925 than in 1915.

For the cities having over 30,000 population in 1925 the funded or fixed debt for general purposes amounted to $2,987,369,056, and that for schools amounted to $874,058,824, or a per capita of $21.45, the school debt representing 29.3 per cent of the total. In 1915 for the 204 cities in this class the debt for general purposes amounted to $1,969,601,729, and for schools, $344,783,605, or a per capita of $11.06, the school debt representing 17.8 per cent of the total.

The percentage of the total debt issued for school purposes is much larger for the smaller cities. For the cities having a population of less than 50,000 in 1925, 40.3 per cent of the total was for schools, while in the cities having over 500,000 population 21.1 per cent was for schools.

For the 247 cities having over 30,000 population in 1925 the total value of land, buildings, and equipment of general departments amounted to $4,973,436,227. Of this total, $1,864,335,933 was for schools, or 37.5 per cent of the total. In 1915 for the 204 cities in this class the value of land, buildings, and equipment of general departments amounted to $2,576,491,410, of which $695,123,593, or 27 per cent, was for schools.

INTERNATIONAL EDUCATIONAL MEETINGS

Three meetings are announced for the spring and summer of 1927 which aim to bring together educators from different nations. The first is an international conference called by the International Bureau of Education at Geneva to be held at Prague, Czecho-Slovakia, April 18–19. The object of this conference is to discuss methods of promoting peace through the schools of the world. The second is the Third General Meeting and Second Biennial Session of the World Federation of Education Associations. This will be held in Toronto, Canada, August 7–12. The third is the World Conference on New Education. This is described in the announcement as the Fourth International Conference of the New Education Fellowship. The meeting will be held in Locarno, Switzerland, August 3–15.

Those who are interested in the Toronto meeting can secure detailed information regarding the program and accommodations from Augustus O. Thomas, Augusta, Maine, or Charles H. Williams, 101 Jesse Hall, Columbia, Missouri. Information regarding the Prague conference can be secured from Pierre Bovet, director of the

International Bureau of Education, Geneva, Switzerland. Information regarding the meeting at Locarno can be obtained by addressing New Education Fellowship, 11 Tavistock Square, London, W.C. 1, England.

THE HEALTH OF TEACHERS

In a pamphlet entitled, *The Health of the Teacher*, published by the United States Bureau of Education, Dr. James F. Rogers makes a number of statements that ought to be read by every teacher. Dr. Rogers finds that, on the whole, members of the teaching profession are remarkably healthy; especially are they free from many of the ordinary ailments which attack the respiratory and digestive organs.

On the other hand, Dr. Rogers finds that there is one type of physical difficulty to which teachers are particularly subject. His statement is as follows:

> When it comes to nervous diseases and especially to those unhappy conditions labeled "neurasthenia" or "nervous exhaustion," the case for the teacher does not seem so favorable, especially if we can take the figures for the New York teachers as indicative and compare them with those for industrial groups. The high percentages of absence of teachers in the London and Victoria schools cannot be interpreted by one unfamiliar with methods and conditions of teaching abroad, and one can only wonder how much the longer teaching year (by some thirty days) has to do with this. When compared with the sickness in the Public Utility Company, it will be seen, however, that the number of cases and the total loss of time are even greater for these clerical workers than for teachers.
>
> Again, one can only surmise that the difference between these two groups and the industrial workers is due, on the one hand, to the wear and tear of dealing with people and, on the other hand, to the objective business of working with things. The industrial laborer feels also that he has more freedom in that he can usually throw up his job and get another if he is not well treated.

The prescription with which Dr. Rogers follows this statement is contained in the following paragraphs.

> The teacher is peculiarly exposed in the course of the day's work not only to general nervous wear and tear but to those mental insults to the nervous machinery which have as real an effect as if they were mechanical blows or doses of bacterial or other poison.
>
> The friction that arises from the inability to understand or deal with certain individual children, who may not be truly incorrigible, or, what is more difficult, the behavior of children collectively, the attitude of parents (often because these

well-intentioned persons are not given due consideration), misunderstandings with superiors, etc., set up a source of friction within the nervous machinery which may go on throughout the course of the twenty-four hours, may disturb digestion, interfere with sleep, and be quite sufficient to send the teacher to the doctor. Unable to lay his finger on any physical cause for the disturbance, the physician is quite justified in classing the ailment as neurasthenia, which, however, does not make it less real than if it were tuberculosis. Such a condition of affairs is especially likely to come about in a teacher who has become unduly fatigued or who has a drain upon her resources from eyestrain or other physical defects. We are all irritable and unreasonable when tired, but the teacher is in a position where she can ill afford to be either the one or the other.

The cure of the disease will only come with the removal of the cause or by shifting the gear of the nervous machinery more or less voluntarily. A heart-to-heart talk with parents, a week-end of complete change, the counsel of a sympathetic superior, may be sufficient.

Every teacher who is worth while is subject to annoyances, worries, and discouragements, and each should give of her help and sympathy to others. What she gives along this line will be returned to her manyfold.

The teacher will find in the following "Eleven Commandments," published anonymously in the *Schoolmaster and Woman Teacher's Chronicle* (London) of February 13, 1925, advice as sound and helpful as it is delightfully worded.

1. Thou shalt have other interests besides thy schoolroom.

2. Thou shalt not try to make of thy children little images, for they are a live little bunch, visiting the wriggling of their captivity upon you, their teacher, unto the last weary moment of the day and showing interest and co-operation unto those who can give them reasonable freedom in working.

3. Thou shalt not scream the names of thy children in irritation, for they will not hold thee in respect if thou screamest their names in vain.

4. Remember the last day of the week, to keep it happy.

5. Humor the feelings of thy children that their good will may speak well for thee in the little domain over which thou rulest.

6. Thou shalt not kill one breath of stirring endeavor in the heart of a little child.

7. Thou shalt not suffer any unkindness of speech or action to enter the door of thy room.

8. Thou shalt not steal for the drudgery of many "papers" the precious hours that should be given to recreation, that thy strength and happiness may appear unto all that come within thy presence.

9. Thou shalt not bear witness to too many "schemes of work," for much scattered effort is a weariness to the soul and a stumblingblock to weary fingers.

10. Thou shalt not covet thy neighbor's room, nor her children, nor her manner, nor her system, nor anything that is thy neighbor's, but work out thine own salvation with fear and trembling—only don't let anyone know about the fear and trembling.

11. Thou shalt laugh—when it rains, and wee, woolly ones muddy the floor; when it blows and doors bang; when little angels conceal their wings and wriggle; when Tommy spills ink and Mary flops a tray of trailing letters; when visitors appear at the

precise moment when all small heads have forgotten everything you thought they knew.

And again I say unto you, *laugh* for upon all these commandments hang all the law and the profits in thy schoolroom.

THE VALUE OF SUPERVISION IN RURAL SCHOOLS

The state superintendent of public instruction of Indiana carried on for two years prior to 1926 an experiment in the supervision of rural schools. At the end of each year of the experiment, measurements were made of the achievements of the pupils, and the two counties in which supervision had been provided were compared with two counties of somewhat similar character in which there had been only very limited supervision.

The results of the experiment were overwhelmingly in favor of supervision. The whole matter is discussed in detail in Educational Bulletin No. 80 issued by the Department of Public Instruction of the State of Indiana under the title, *Value of Rural School Supervision.*

Statements from this bulletin are as follows:

The combined results of the tests in reading, language, spelling, and arithmetic show that during the first year of the experiment the schools of the demonstration counties taken as a whole accomplished 14.3 per cent more work than the schools of the control counties. During the second year this superiority was even more marked, progress in the demonstration counties exceeding that made in the control counties by 25.7 per cent. In other words, the pupils of LaGrange and Johnson counties, who enjoyed the advantages of supervision, learned in the first year about a seventh more, and in the second year about a quarter more, than the pupils in the schools of Rush and Whitley counties, which had no supervisors.

In every grade in which tests were given, pupils in the demonstration counties made the greater improvement. In the first year the percentages by which the progress of pupils of the demonstration counties exceeded the progress of pupils in the control counties ranged from 6.5 in the fourth grade to 23.8 in the sixth grade. In the second year the smallest difference was in the third grade, where the progress in the demonstration counties was 14.6 per cent more than in the control counties; the greatest difference was in the seventh grade, where the demonstration counties did 37.9 per cent more work. . . . .

Besides favorably affecting instruction, supervision was the direct cause of other improvements less easily measured. Personal opinion has some value in this connection, and for that reason the judgments of different persons connected with the demonstrations are given.

Both county superintendents expressed themselves as being convinced that great progress was made during the demonstration. Not only did they notice a difference in the achievement of the pupils in their studies, but they also observed a marked difference in their general attitude toward the school.

The children themselves were appreciative. They enjoyed the tests that the supervisors gave and were delighted with the extra books that were made available. They derived great pleasure and profit from the new study plan which gave them more free time for extra reading, drawing, and handwork.

In one school the children became so much interested in improving their school that they made a survey of the building and grounds, called in the parents, made a report to them of their findings, led in the discussions which followed, and were instrumental in bringing about a resolution requesting the State Board of Health to examine their building with a view to condemning it for further use if it were found unfit. The example set by the pupils and parents in this particular school district was followed by the other school districts of the township, with the result that by the beginning of the second year of the demonstration all the school buildings in this township had been abandoned and in their place a modern, seven-room rural-school building had been erected.

The teachers also testified to the value of supervision. In order that a wholly unbiased and free judgment might be given by the teachers, the director of the demonstration, at the close of the first year of the experiment, wrote individual letters to each of the teachers questioning them about supervision and requesting them not to sign their answers. Almost all replied.

To Question 1, which was, "Do you believe that a plan of supervision such as has been attempted in your county this year is worth while?" a fraction over 94 per cent of all who replied answered, "Yes," while a fraction under 6 per cent said, "No."

In answer to the second question, "Has the work of the supervisor been a help to you in solving your teaching problems?" 96 per cent said, "Yes," while $3\frac{1}{3}$ per cent said, "No."

In answer to the fourth question, "Would you as a teacher in the county next fall desire the continuance of the work next year?" 93 per cent said, "Yes," while $6\frac{1}{2}$ per cent said, "No."

DIRECTED WORK FOR TEACHERS

It has long been recognized as desirable that the work of classroom teachers should be carefully organized. Lesson-plan books are well known and widely used. It has been by no means as common for supervisors to arrange programs for professional study by teachers. Supervisors have relied on the inspiration of the moment to direct teachers. Supervisors have been very free to impose tests on the pupils with a view to evaluating the work of teachers, but they

have not been energetic in measuring their own results. Until recently there has been very little literature on supervision.

Indications accumulate that in the future supervision is to be more systematic in organization and more careful in the recording of its results. For several years the State Department of Education of Maryland has been publishing reports from the various counties of the state on the work of supervisors and on the results secured. The fourth report of this type, entitled, *A Supervisor of Town Schools Analyses Her Work for the Year 1925–1926*, presents an account of the activities of Lula H. Crim, the supervising teacher of Carroll County. It contains material on the following topics, on which State Superintendent Albert S. Cook collected information from all the supervisors in the state.

1. The number and the type of teachers' meetings which you conducted, or in which you participated, with sample programs of each kind; comment on the relative value of each type.
2. Progress made in the realization of this year's state-wide and county objectives and the means employed to secure this program.
3. Comment on helps and handicaps in your work.
4. Means employed to inform the public concerning the work of the school and the function of supervision.
5. Possible county objectives for next year.
6. Other activities not included above.
7. Summary of activities by months.

Another type of supervisory material is that employed by Superintendent L. L. Caldwell, of Hammond, Indiana. The following quotation, which is part of a mimeographed bulletin sent to the teachers in Hammond at the beginning of the school year, is clear in its indications of the plans of work adopted in that school system.

In line with our discussion of problems in teaching at our last general meeting, I am sending you the following list of suggestive problems and comments on the subject.

This list of problems is intended to be only suggestive of the many possibilities in the different school subjects. Classroom situations bristle with problems. The following steps may help you to select problems for special emphasis.

1. Make a list of the difficult situations in your classroom experience.
2. Select one of these situations.
3. Analyze it to determine the essential elements making it a problem.

4. Formulate a plan of work and bring to bear upon it the resources of your training and experience and of our library.

5. Feel free to ask for conferences.

Two or three teachers might work co-operatively on such problems.

PROBLEMS FOR TEACHER STUDY AND RESEARCH

I. Problems in number—arithmetic
   1. Giving meaning to arithmetic—its social and educative uses
   2. Developing pupil self-help in arithmetic in—
      a) Fundamental operations (Studebaker practice exercises; Lennes tests)
      b) Problem-solving
   3. Diagnosing pupil habits in arithmetic
   4. Specific number situations
   5. The drill period in arithmetic
   6. Methods in column addition
   7. Estimating results in problem-solving

II. Problems in reading
   1. Extending and improving the pupil's library reading
   2. Diagnosing pupil habits in reading
   3. Effective methods in oral reading
   4. Effective methods in silent reading
   5. Devices and methods of improving eye-movements
   6. Use of children's story-books in reading
   7. Dramatization as an aid to reading
   8. Overcoming lip-movement in reading
   9. Inner speech and effective study

III. Problems in the use of time
   1. Developing effective study habits
   2. Making the assignment effective for self-help
   3. Systematizing classroom mechanics
   4. The use of extra time

IV. Problems in character-building
   1. Teaching ideals
   2. Developing responsibility
   3. Stimulating purpose
   4. Case studies

In order to co-ordinate our work to the best advantage and make every effort count for the most, we desire to have a list of all the special studies going on in the schools.

Kindly give this subject due attention and select two or three problems on which you desire to work. List these in writing and underscore the one you prefer to take up first.

DETAILED ACCOUNTS OF PUPIL ACHIEVEMENTS

The following statement, published by the *Christian Science Monitor*, gives an account of the type of report which has been adopted by the school system of Hammond, Indiana, to describe the achievements of pupils.

The ordinary report card issued to each student at the end of a certain period, usually six weeks, consisting of a list of subjects taught with the numerical or alphabetical ranking of the student, is in many cases of little value to the teacher, the student, or the parent. A new card introduced in Hammond, Indiana, by Superintendent Caldwell records an analytical study of the pupil's progress and suggests a new style of report record.

Two cards are used: one for the kindergarten and first, second, and third grades; the other for the fourth, fifth, and sixth grades. In the lower grades, markings are made in six subjects, as follows: English, number, nature study, music, games, and handwork.

English is divided into four units, each having a number of subdivisions. The units and subdivisions are as follows: Speech: (*a*) speaks freely, (*b*) speaks distinctly, (*c*) makes meaning clear, (*d*) understands what is said. Literature: (*a*) listens to stories with interest, (*b*) enjoys rhymes and poems. Reading: (*a*) likes to read, (*b*) thinks about what he reads, (*c*) gives meaning to others when he reads, (*d*) recognizes characteristics of words, (*e*) works out new words independently. Writing: (*a*) tries to write well, (*b*) writes plainly according to standards, (*c*) keeps work neat.

Number has three subdivisions, as follows: (*a*) sees relations of quantity, size, etc., (*b*) reasons in working out problems, (*c*) is accurate.

Nature study is graded on the basis of two subdivisions: (*a*) is interested, (*b*) brings in, or tells of, interesting objects.

Music has four subdivisions: (*a*) enjoys music, (*b*) joins in the songs, (*c*) reproduces tones correctly, (*d*) controls voice well—soft quality.

Games and handwork are each subdivided into three parts, as follows: Games: (*a*) takes part with interest, (*b*) controls movements of the body, (*c*) responds to rhythm. Handwork: (*a*) sees possibilities of materials, (*b*) works with purpose, (*c*) concentrates on work.

Instead of marking each of these divisions with a numerical or alphabetical rating, the teacher uses symbols signifying (1) satisfactory progress, (2) improvement desired, (3) showing improvement.

"Habits of Citizenship" is the title of the inside of the four-page report. Under this caption, ten habits are listed, with subdivisions under each, in order that the teacher may make a report of these fundamentals of good citizenship. Among these are the following:

Orderliness: (*a*) takes care of wraps, (*b*) gets and puts away materials properly, (*c*) keeps desk and materials in good order.

Promptness: (*a*) gets to school on time, (*b*) responds to signals instantly, (*c*) gets and puts away materials promptly, (*d*) begins and finishes work on time.

Industry and perseverance: (*a*) sees things to be done and does them, (*b*) makes his own plans and works them out, (*c*) pays attention to directions and carries them to finish, (*d*) satisfied only with best he can do.

Co-operation: (*a*) works and plays with others harmoniously, (*b*) helps carry out suggestions made by the class, (*c*) helps keep school building and grounds neat.

Honesty: (*a*) does not take what belongs to others without asking, (*b*) does not cheat in work and play, (*c*) can be depended upon to keep promises, (*d*) is truthful.

Courage: (*a*) will try to do things even though they look hard, (*b*) if wrong, will admit it and try to make it right, (*c*) not afraid to tell the truth even when it hurts.

Thrift: (*a*) takes care of books, supplies, clothes, etc., (*b*) does not waste pencils, paper, etc., (*c*) does not waste time.

The card used in the upper grades is similar to the one described. The academic subjects are listed in less detail. The citizenship card is also similar although advanced, with the advancement in the scholastic standing of the pupils graded.

In connection with the new style report cards introduced in Hammond, Superintendent Caldwell has issued a self-rating character card for pupils in the fourth, fifth, and sixth grades of his schools. Students are encouraged to rate themselves as to the prevalence of certain positive or negative habits in their personalities. These plans have attracted wide attention from educators who are interested in character formation as the chief purpose of education.

FAILURES IN READING AND ARITHMETIC

In *The California Curriculum Study*, prepared by Professors William C. Bagley and George C. Kyte and recently published by the University of California, there is a chapter which deals with subject failures in the elementary school. An aggregate of 9,217 failures were reported from city and county schools with a statement of the subjects in which the pupils failed.

If one compares the distribution of failures with those reported in the surveys of Cleveland, St. Louis, and Grand Rapids, one is impressed by the close resemblance between the findings in these surveys of a decade ago and in this survey. Especially impressive are the figures for reading and arithmetic.

Reading is the subject in which pupils most commonly fail in the first grade. Out of a total of 1,769 failures in this grade, 1,753

are in reading. After the first grade, failures in reading rapidly decrease in number until in the fourth grade and beyond they become less numerous by far than failures in arithmetic.

Failures in arithmetic, on the other hand, increase in number from the first grade to the fourth. The decrease which appears in the fifth and subsequent grades is doubtless to be attributed in some measure to withdrawals rather than to increased success in the mastery of the subject.

The figures given for reading and arithmetic on page 351 of the California study are as follows:

Grade	Number of Failures in Reading	Number of Failures in Arithmetic
I	1,753	184
II	705	386
III	474	540
IV	374	575
V	217	457
VI	164	400
VII	130	390
VIII	62	186

Nothing can be clearer in the light of these facts than that arithmetic is in need of drastic revision. The pupils who fail in increasing numbers in the third and fourth grades are not defectives. Their ability to read proves this beyond the possibility of dispute. There is something in the content of arithmetic or in the methods of instruction which makes it impossible for many of the pupils in the intermediate grades to cope with the subject.

Every teacher recognizes the fact that, when a pupil gets into difficulty with arithmetic, the subject grows increasingly incomprehensible as he advances. It does not seem to have occurred to any considerable number of teachers that arithmetic must be retaught in its rudiments to pupils in the middle grades who have become confused.

There is a field for experimental work in arithmetic which is much in need of cultivation by teachers and students of the science of education. At the present time arithmetic is badly organized and inefficiently taught. It is not suited to the capacities of a large num-

ber of pupils, and the statistics of failures show that the school is not performing its plain duty.

RELIGIOUS INSTRUCTION DURING SCHOOL TIME

The following statement is quoted from the *New York Sun*.

The legality of the practice followed by numerous school boards in dismissing pupils for one hour a week during school hours for the purpose of permitting them to attend religious classes outside the school buildings, was unanimously upheld by the Appellate Division, Third Department, in a test case brought by Joseph Lewis, president of the Freethinkers' Society, against State Commissioner Frank P. Graves.

Mr. Lewis sought to compel Dr. Graves to instruct the school authorities in White Plains to discontinue the plan. A similar policy is followed in more than one hundred towns and villages of the state of New York and in numerous cities elsewhere.

Mr. Lewis had lost his suit for a similar writ in the Albany Special Term several months ago, and the decision yesterday was on his appeal from the ruling of the lower court.

The attack on the practice of the school authorities was led by Arthur Garfield Hays and John C. Mahon of New York City, counsel for the Freethinkers' Society, on the grounds that it violates one of the fundamental provisions of the Constitution declaring that the church and state shall remain separate, and that it is in conflict with the compulsory school attendance law.

Ex-Senator Ernest E. Cole, counsel for Dr. Graves, argued that not to permit the absence of children from school to attend their church classes would be an interference with religious liberty. He pointed out that no pupil is required to attend the church classes.

John R. Bushong filed a brief for the general committee on week-day religious instruction of White Plains, which declared that to hold the plan unconstitutional "would be a direct blow to the training of American youth, contrary to fundamental public policy, and would amount to moral anarchy."

It is expected that an early appeal will be taken to the Court of Appeals and after that to the United States Supreme Court.

THE DUTIES OF THE ELEMENTARY-SCHOOL PRINCIPAL

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What is the most important phase of the work of an elementary-school principal? An answer to this question was sought from teachers, supervisors, superintendents, students of education, professors of education, and elementary-school principals themselves. Of 192 replying, 107 ranked supervision first in importance, and 85 ranked administration first. Of the thirty-eight principals who replied, 50 per cent ranked supervision first, and 50 per cent ranked administration first. As a result of this inquiry, it seemed advisable to determine how principals really spend their time. The study here reported, which was made during the school year 1925–26, is based on records kept by certain principals for two weeks.

The following letter was sent during the first week of December, 1925, to approximately 130 principals outside of Baltimore and to approximately 40 principals in the city of Baltimore.

> In connection with a study of the duties of an elementary-school principal and the apportionment of the principal's time among the various duties, I am seeking your co-operation in keeping a diary of your daily work for a period of two weeks from January 4 to January 15. Will you be good enough to keep the record on the accompanying sheets in some such form as is indicated on the sample sheet? Please return in the inclosed envelope at the end of the fortnight.
>
> You need not hesitate to send in the exact record of your activities, since the report will be entirely confidential.

With this letter was inclosed a sample sheet of the writer's daily record of duties and twelve diary sheets, two extra sheets being allowed for errors. The material was sent to cities where the writer had some point of contact through the superintendent or supervisor. In Baltimore, it was given to a class taught by Florence E. Bamberger at Johns Hopkins University; the members of this class were principals in Baltimore engaged in studying the elementary-school principalship. Post-card reminders of the request to keep the diaries were

sent in sufficient time to reach the principals concerned during the last few days of December, and a note of thanks was sent after the diaries were returned. The first two weeks of January were selected

TABLE I

SOURCE OF REPLIES RECEIVED

	Number of Replies
Baltimore	25
Cleveland	5
Detroit	6
Los Angeles	15
Newton, Massachusetts	5
Pennsylvania	4
Philadelphia	6
Unknown	1
Total	67

TABLE II

DISTRIBUTION OF SCHOOLS ON THE BASIS OF SIZE

Number of Pupils Enrolled	Number of Schools in Baltimore	Number of Schools outside of Baltimore
88–199	.....	2
200–399	4	7
400–599	6	4
600–799	6	10
800–999	4	5
1,000–1,199	2	7
1,200–1,399	2	2
1,400–1,599	1	1
1,600–1,799	.....	1
1,800–1,999	.....	1
Unknown	.....	2
Total	25	42

for the study, since it was thought that they would probably be more typical than many other fortnights.

Table I shows the source of the replies. It was not possible to provide for a good distribution of large, medium, and small schools, since the available lists did not include the necessary information. Table II shows the size of the schools from which diaries were received.

In recording the data, the writer kept each principal's record separate, noting the time spent each day according to the following list of duties and then totaling the time for the entire fortnight by duties, by classes of duties, and as a whole.

Administrative duties:
- Inspecting school plant
- Planning alterations in school plant
- Supplies and equipment
- Distributing checks
- Problems of attendance and tardiness
- Conferences with attendance officer
- Discipline
- Receiving and classifying pupils
- Promoting, placing, and transferring pupils
- Conducting faculty meetings
- Principals' meetings
- Oversight of athletics
- Inspecting janitorial work
- Conferences with janitor and engineer
- School assemblies
- Fire drills
- Conferences with superintendents and directors
- Conferences with doctor and nurse
- Conferences with workmen, tradesmen, etc.
- Preparing for meetings
- Planning for organization of school
- Conferences with lunchroom manager
- Conferences with pupils
- Supervising playground, exits, etc.
- Placing substitutes
- Conferences with teachers
- Extra-curriculum activities
- Operating lantern or motion-picture machine
- Problems relating to health of pupils
- Miscellaneous

Supervisory duties:
- Conducting tests and measuring results
- Conferences with individual teachers
- Group conferences on professional subjects
- Supervising instruction
- Planning for teaching
- Planning for meetings
- Conferences with supervisor
- Attending meetings on supervision
- Working on course of study
- Professional reading and study
- Teaching
- Miscellaneous

Clerical duties:
- Reports
- Reading mail and notices
- Writing letters
- Card records
- Conferences with clerk
- Telephone
- Correcting and marking papers
- Examining teachers' record books
- Miscellaneous

Community and miscellaneous:
- Parent-teacher association
- Conferences with parents and visitors
- Helping with community activities
- Helping with social activities
- Visiting pupils' homes
- Visiting library
- Miscellaneous

Teaching own class:
- Planning for teaching

TABLE III

PERCENTAGE OF TIME DEVOTED TO VARIOUS DUTIES BY THE PRINCIPALS IN SCHOOLS OF VARIOUS SIZES OUTSIDE OF BALTIMORE

	Number of Pupils Enrolled								All Schools
	88–399	400–599	600–799	800–999	1,000–1,199	1,200–1,399	1,400–1,800	Unknown	
Administrative duties:									
Inspecting school plant	2.3	1.6	1.6	0.9	1.7	0.7	1.0	1.3	1.4
Supplies and equipment	2.4	2.2	2.9	0.1	2.2	0.7	.....	0.6	1.4
Distributing checks	.....	.....	.....	.....	.....	.....	.....	.....	.....
Problems of attendance and tardiness	0.5	0.5	1.1	0.5	0.5	0.3	0.8	1.9	0.8
Conferences with attendance officer	0.5	0.6	0.9	1.0	1.0	1.5	0.6	.....	0.8
Discipline	2.1	0.9	1.7	1.0	2.1	.....	0.6	.....	1.5
Receiving and classifying pupils	1.2	0.5	0.7	0.6	1.7	0.3	0.5	1.0	0.8
Promoting, placing, and transferring pupils	0.5	1.4	.....	.....	.....	.....	0.4	.....	0.3
Conducting faculty meetings	1.0	0.7	1.3	0.5	1.3	2.2	0.6	1.4	1.3
Principals' meetings	3.0	2.7	3.8	5.0	3.8	1.2	4.6	4.8	3.7
Conferences with janitor and engineer	1.0	1.6	1.3	1.0	0.6	1.3	0.5	0.7	1.0
School assemblies	.....	1.3	1.2	2.0	0.8	.....	3.3	0.7	1.2
Fire drills	.....	.....	.....	.....	.....	.....	.....	.....	.....
Conferences with superintendents and directors	1.2	2.3	0.9	1.6	1.9	3.0	7.0	2.3	2.5
Conferences with doctor and nurse	1.3	1.4	1.0	1.0	.....	.....	0.5	.....	0.7
Conferences with workmen, tradesmen, etc.	1.1	0.4	0.9	0.7	1.1	.....	0.4	1.0	0.6
Preparing for meetings	0.7	.....	.....	.....	2.2	.....	0.5	0.7	0.5
Planning for organization of school	1.2	0.9	2.1	3.8	2.0	2.0	1.0	1.2	1.7
Conferences with pupils	1.8	3.2	2.4	2.2	1.3	2.7	1.0	3.3	2.4
Supervising playground, exits, etc.	8.8	5.8	6.0	5.0	2.4	2.0	10.4	4.9	5.7
Placing substitutes	.....	.....	.....	.....	.....	.....	.....	.....	.....
Conferences with teachers	1.3	1.8	4.9	5.8	4.9	8.2	12.3	6.8	5.8
Extra-curriculum activities	0.5	6.1	2.6	2.0	1.3	3.0	0.8	0.7	2.1
Problems relating to health of pupils	.....	1.5	.....	1.0	.....	.....	.....	.....	.....
Miscellaneous	3.9	5.4	6.5	10.0	11.0	8.0	8.1	8.9	5.8
Total	37.0	43.0	47.0	47.0	45.4	40.0	58.0	46.0	44.8
Supervisory duties:									
Conducting tests and measuring results	2.2	2.2	2.1	1.6	2.2	0.7	7.0	2.2	2.5
Conferences with individual teachers	4.0	5.3	3.2	3.1	3.4	2.0	1.0	4.5	3.6
Group conferences on professional subjects	0.6	2.2	1.4	0.9	1.0	.....	0.3	3.5	1.2
Supervising instruction	7.4	11.0	14.0	16.0	13.0	25.0	12.8	14.5	14.2

TABLE III—*Continued*

	Number of Pupils Enrolled								All Schools
	88–399	400–599	600–799	800–999	1 000–1,199	1,200–1,003	1,400–1,800	Unknown	
Supervisory duties—*Cont.*									
Conferences with supervisor	.....	.....	0.9	0.9	1.8	1.2	0.3	1.0	0.8
Attending meetings on supervision	.....	.....	.....	.....	.....	.....	.....	.....	.....
Working on course of study	.....	.....	1.6	.....	0.6	.....	.....	.....	.....
Professional reading and study	2.1	1.7	1.0	.....	3.4	.....	0.3	.....	1.0
Teaching*	5.3	5.4	2.8	1.9	2.5	2.7	1.0	3.7	3.1
Miscellaneous	.....	5.2	0.8	.....	2.3	.....	0.3	0.9	.....
Total	25.0	35.0	29.0	27.0	31.3	32.0	23.0	33.0	30.0
Clerical duties:									
Reports	4.0	2.9	2.3	0.9	2.2	0.7	1.0	1.8	2.0
Reading mail and notices and writing letters	4.0	3.5	3.5	6.3	6.0	3.4	4.4	3.9	4.3
Conferences with clerk	.....	.....	.....	.....	.....	.....	.....	.....	.....
Telephone	1.7	1.3	0.9	2.7	1.6	1.9	2.5	3.6	2.0
Miscellaneous	2.6	4.7	6.7	5.1	4.2	13.4	6.3	5.7	6.1
Total	17.0	14.0	17.0	17.0	15.5	21.0	14.5	15.0	16.0
Community and miscellaneous:									
Parent-teacher association	1.4	1.7	1.7	3.2	3.5	1.4	.....	3.0	2.0
Conferences with parents and visitors	4.5	4.2	3.4	3.9	3.4	5.6	3.7	3.0	3.9
Total	7.0	8.0	7.0	9.0	7.8	7.0	4.5	6.0	7.5
Teaching own class and planning for teaching	14.0	.....	.....	.....	.....	.....	.....	.....	1.7

* This item is not included in the total percentage of time devoted to supervision.

The total number of minutes spent by each principal during the fortnight was determined. For the principals outside of Baltimore the median time was 6.8 hours a day, and the range was from 5.0 hours to 8.3 hours. For the principals in Baltimore the median time was 7.4 hours a day, and the range was from 6.5 hours to 8.0 hours.

In the preparation of the tables, every minute of time recorded was used in computing the total percentage of time devoted to administration, supervision, etc.; but, for the purpose of this report, the time devoted to any duty was not recorded if it was less than 0.1 per cent.

TABLE IV

PERCENTAGE OF TIME DEVOTED TO VARIOUS DUTIES BY THE PRINCIPALS IN SCHOOLS OF VARIOUS SIZES IN BALTIMORE

	Number of Pupils Enrolled							All Schools
	200–399	400–599	600–799	800–999	1,000–1,199	1,200–1,399	1,539	
Administrative duties:								
Inspecting school plant	0.8	0.8	1.6	1.1	.....	1.4	1.3	1.0
Supplies and equipment	2.6	0.9	1.5	1.7	2.1	1.9	1.3	1.7
Distributing checks	.....	0.2	0.2	.....	0.6	0.3	.....	0.2
Problems of attendance and tardiness	1.0	2.4	1.8	1.8	0.6	0.6	.....	1.2
Conferences with attendance officer	0.5	1.5	1.0	0.5	0.6	2.3	0.7	1.0
Discipline	0.6	2.4	1.2	3.7	2.7	3.1	0.7	2.0
Receiving and classifying pupils	0.3	0.6	0.6	0.6	1.5	0.9	0.7	0.7
Promoting, placing, and transferring pupils	.....	0.5	0.3	.....	.....	0.2	.....	0.1
Conducting faculty meetings	0.8	1.5	1.4	1.3	1.2	.....	0.7	1.0
Principals' meetings	4.5	3.3	3.3	3.5	3.5	3.9	3.9	3.4
Conferences with janitor and engineer	0.8	2.4	2.3	2.6	1.3	2.3	2.6	2.0
School assemblies	0.8	0.6	1.1	.....	1.2	1.4	0.9	0.9
Fire drills	.....	.....	.....	.....	.....	.....	.....	.....
Conferences with superintendents and directors	2.1	0.8	0.5	1.3	.....	0.6	2.6	1.2
Conferences with doctor and nurse	0.6	1.4	0.9	1.2	0.8	2.8	1.0	1.3
Conferences with workmen, tradesmen, etc	.....	0.1	0.7	0.6	0.6	0.4	0.7	0.5
Preparing for meetings	.....	.....	0.2	0.3	.....	.....	.....	.....
Planning for organization of school	0.3	1.3	1.4	0.4	2.0	0.6	4.0	1.4
Conferences with pupils	1.4	1.5	1.5	1.7	1.2	0.4	1.5	1.4
Supervising playground, exits, etc	7.8	8.0	7.6	6.5	6.1	7.4	5.2	6.9
Placing substitutes	.....	.....	.....	.....	.....	0.9	.....	.....
Conferences with teachers	3.2	5.0	3.5	5.8	5.5	6.5	6.1	5.0
Extra-curriculum activities	0.8	1.6	1.3	0.9	0.9	1.4	1.1	1.1
Problems relating to health of pupils	.....	0.9	0.2	0.3	0.6	0.7	0.7	0.5
Miscellaneous	5.4	2.9	7.7	7.3	7.0	4.6	4.8	5.6
Total	35.0	40.7	42.3	44.2	40.5	44.6	40.5	41.1
Supervisory duties:								
Conducting tests and measuring results	0.4	6.0	7.3	.....	3.8	0.5	.....	2.6
Conferences with individual teachers	2.5	3.6	1.8	2.5	2.7	4.0	6.2	3.3
Group conferences on professional subjects	.....	0.4	0.8	0.9	.....	0.5	.....	0.4
Supervising instruction	8.3	15.5	7.9	9.8	8.8	13.2	17.1	11.5
Conferences with supervisor	1.0	1.3	0.6	0.9	0.8	1.5	1.1	1.0
Attending meetings on supervision	0.8	2.3	1.9	0.1	2.5	1.5	3.5	1.8

TABLE IV—*Continued*

	Number of Pupils Enrolled							All Schools
	200–399	400–599	600–799	800–999	1,000–1,199	1,200–1,399	1,539	
Supervisory duties—*Cont.*								
Working on course of study	.....	.....	.....	.....	.....	.....	.....	.....
Professional reading and study	5.8	6.0	4.4	4.5	8.0	5.6	5.6	5.7
Teaching*	4.5	1.6	6.8	2.4	1.2	0.5	0.6	2.5
Miscellaneous	0.7	.....	1.7	1.1	.....	1.2	.....	0.8
Total	24.2	37.2	33.4	23.2	28.3	28.7	34.1	29.8
Clerical duties:								
Reports	0.5	0.5	0.7	.....	.....	0.3	.....	0.3
Reading mail and notices and writing letters	2.4	2.6	3.2	3.1	2.5	3.1	2.4	2.8
Telephone	0.8	2.1	3.0	2.5	2.7	2.0	3.3	2.3
Correcting and marking papers	0.6	.....	0.3	2.1	.....	.....	.....	.....
Miscellaneous	9.5	10.0	7.7	14.7	14.7	11.7	11.2	11.3
Total	15.2	17.8	18.8	26.3	23.7	20.3	21.0	20.6
Community and miscellaneous:								
Parent-teacher association	0.2	0.5	0.5	0.1	3.3	1.2	.....	0.8
Conferences with parents and visitors	2.4	3.5	4.0	4.6	4.0	4.3	4.4	3.9
Total	2.6	4.3	5.5	6.3	7.5	6.4	4.4	5.2
Teaching own class and planning for teaching	23.0	.....	.....	.....	.....	.....	.....	3.3

* This item is not included in the total percentage of time devoted to supervision.

The individual summaries were grouped according to the school enrolment as given in Table II. The group totals were then changed to percentages, as shown in Tables III and IV.

Since the way in which a principal spends his time is affected to some extent by whether or not he has a vice-principal or a clerk, the data in Table V are presented.

A study of the findings of this investigation shows the following tendencies.

The principals in Baltimore have far less clerical assistance than is provided elsewhere throughout the country. Sixty-four per cent of the Baltimore schools reporting have neither vice-principals nor clerks as compared with 14 per cent of the schools outside of Baltimore.

The percentage of time devoted to each of the four listed phases of the principal's work is shown in Table VI. It may be observed that, both outside of Baltimore and in Baltimore, the administrative side of the principal's work is consuming more than 40 per cent of his time and that 30 per cent is devoted to supervision. It seems, therefore, that the Baltimore principals reporting devote as much of their time to supervision as does the average principal outside of Balti-

TABLE V

NUMBER OF SCHOOLS OF VARIOUS SIZES HAVING VICE-PRINCIPALS AND CLERKS

NUMBER OF PUPILS ENROLLED	NUMBER OF SCHOOLS HAVING VICE-PRINCIPALS		NUMBER OF SCHOOLS HAVING CLERKS				NUMBER OF SCHOOLS HAVING NEITHER VICE-PRINCIPALS NOR CLERKS	
	Outside of Baltimore	In Baltimore	Outside of Baltimore		In Baltimore		Outside of Baltimore	In Baltimore
			Full Time	Part Time	Full Time	Part Time		
88–199	.....	.....	.....	1	.....	.....	1	.....
200–399	.....	.....	1	2	.....	.....	4	4
400–599	1	1	2	1	.....	.....	.....	5
600–799	4	1	3	5	.....	.....	1	5
800–999	3	2	2	2	.....	1	.....	1
1,000–1,199	3	1	7	.....	1	.....	.....	1
1,200–1,399	2	2	2	.....	.....	.....	.....	.....
1,400–1,599	.....	.....	1	.....	1	.....	.....	.....
1,600–1,799	.....	.....	1	.....	.....	.....	.....	.....
1,800–1,999	.....	.....	1	.....	.....	.....	.....	.....
Unknown	.....	.....	.....	.....	.....	.....	.....	.....
Total	13	7	20	11	2	1	6	16
Percentage	31.0	28.0	47.6	26.2	8.0	4.0	14.3	64.0

more in spite of the fact that the principals in Baltimore have less clerical assistance. More time is devoted to clerical work and less to community work in Baltimore than outside of Baltimore.

An examination of the several items under each phase of work will show that, of the time devoted by the principals to administrative duties, the greatest amount is given to supervising the playground, exits, etc., conferences with teachers occupying second place. Of the time devoted to supervisory duties, the greatest amount is given to classroom visitation, the principals in Baltimore and the principals outside of Baltimore devoting to this activity 11.5 per

cent and 14.2 per cent of their time, respectively. It seems worthy of note that, in spite of the amount of time being spent in classroom observation, only a little more than 3 per cent of the time is spent in individual conferences with teachers, with a very small additional amount devoted to group conferences. Even though part of the time assigned to conferences with teachers under administrative duties may belong to conferences with teachers following classroom visitation, the total amount would still seem too low to enable teachers to get real help from the principal's visits to their classrooms.

TABLE VI

PERCENTAGE OF TIME DEVOTED TO EACH PHASE OF THE PRINCIPAL'S WORK

	Schools outside of Baltimore	Schools in Baltimore
Administrative duties	44.8	41.1
Supervisory duties	30.0	29.8
Clerical duties	16.0	20.6
Community and miscellaneous	7.5	5.2

In view of the data here presented, it may be stated, first, that the average principal is finding it impossible to devote 50 or 60 per cent of his time to supervision, as Cubberley and other writers urge; second, that principals may well subject to careful analysis and scrutiny the way in which they spend their time in order that they may increase their efficiency; third, that boards of education and superintendents should do all in their power to relieve principals of some of the minor duties which now occupy much of their time in order that their best efforts may be devoted to that most important work, the improvement of instruction.

THE LAW GOVERNING SCHOOL-BOARD PROCEDURE AND RECORDS. II

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WHAT CONSTITUTES A QUORUM?

A simple majority of a school board constitutes a legal quorum unless the statutes provide otherwise.[1] Even where a statute authorizes a board of education to settle its own rules of procedure, the common-law quorum of a simple majority holds and cannot be modified.[2] The act of a majority of a quorum, whether fixed by common law or by statute, is the act of the board.[3] As was said by Mr. Justice Brewer of the United States Supreme Court, "The general rule of all parliamentary bodies is that, the act of the majority of the quorum is the act of the body. This has been the rule for all time, except so far as in any given case the terms of the organic act under which the body is assembled have prescribed specific limitations."[4] Nor does it matter that there may be a vacancy in the board, for such a body does not lose its entity so long as there exists a legal quorum.[5]

NUMBER OF VOTES NECESSARY FOR THE PASSAGE OF A MEASURE

Under all circumstances it is necessary, of course, that a quorum be present before a board undertakes the transaction of business. In the absence of any statutory regulation, a majority of the quorum,

[1] *Jensen* v. *Independent Consolidated School District*, 199 N.W. 911; *Decker* v. *School District*, 101 Mo. App. 115, 74 S.W. 390; *Collins* v. *Janey*, 147 Tenn. 477, 249 S.W. 801.

[2] *Zeiler* v. *Central Railroad Company*, 84 Md. 304; *Heiskell* v. *Mayor*, 65 Md. 125, 57 Am. Rep. 308.

[3] *United States* v. *Bollin*, 144 U.S. 1, 12 Sup. Ct. 507; *Jensen* v. *Independent Consolidated School District*, 199 N.W. 911; *Trustees of Slaughterville Graded School District* v. *Brooks*, 163 Ky. 200, 173 S.W. 305; *Attorney-General* v. *Bickford*, 77 N.H. 433, 92 Atl. 835, Ann. Cas. 1913B 119; *Schofield* v. *Watkins*, 22 Ill. 66.

[4] *United States* v. *Bollin*, 144 U.S. 1, 12 Sup. Ct. 507.

[5] *Trustees of Slaughterville Graded School District* v. *Brooks*, 163 Ky. 200, 173 S.W. 305.

or of those present, is not necessary for the passage of a measure. If a quorum be present, a majority of those actually voting is sufficient to validate any measure under consideration.[1] The courts adhere strictly to the rule that, where a quorum is present, mere refusal to vote on the part of some members will not defeat the action of those actually voting. It is the duty of all members present to vote, and, if they fail to do their duty, they must be regarded as assenting to whatever the majority of those who vote may determine.[2] Those who may wish to defeat a measure must vote against it, for inaction will not accomplish their purpose. If the rule were otherwise, minorities of deliberative bodies might resort to obstructive tactics and, by refusal to vote, defeat or postpone the passage of measures which the majority favor.

The case of *Collins* v. *Janey*[3] is an excellent illustration of this principle of law. At a full meeting of a school board a contract was discussed, and, upon motion to adopt it, three members voted "Aye," two "No," and two did not vote. The chairman of the board was directed to execute the contract but refused to do so on the ground that it had not received the assent of a majority of the board members. The court held the contract valid on the theory that the two members who refused to vote must be regarded as having given their assent to the action taken by the majority of those voting. Similarly, in the case of *Attorney-General* v. *Shepard*,[4] six of the seven members of a board of aldermen were present. Three voted for a measure, and the other three refused to vote. The court held that the measure had been carried. The same position has been taken by the Supreme Court of Indiana, where, in the election of a county superintendent of schools, three township trustees voted for one candidate and three refrained from voting.[5]

[1] *Collins* v. *Janey*, 147 Tenn. 477, 249 S.W. 801; *Attorney-General* v. *Bickford*, 77 N.H. 433, 92 Atl. 835, Ann. Cas. 1913B 119; *Attorney-General* v. *Shepard*, 62 N.H. 383, 13 A.S.R. 576; *Launtz* v. *People*, 113 Ill. 137, 55 Am. Rep. 405; *Rushville Gas Co.* v. *City of Rushville*, 121 Ind. 206, 23 N.W. 72, 16 A.S.R. 388, 6 L.R.A. 315; *State* v. *Yates*, 19 Mont. 239, 47 Pac. 1004, 37 L.R.A. 205; 28 Cyc. 339.

[2] *Collins* v. *Janey*, 147 Tenn. 477, 249 S.W. 801; *Rushville Gas Co.* v. *City of Rushville*, 121 Ind. 206, 23 N.W. 72, 16 A.S.R. 388, 6 L.R.A. 315.

[3] *Collins* v. *Janey*, 147 Tenn. 477, 249 S.W. 801.

[4] *Attorney-General* v. *Shepard*, 62 N.H. 383, 13 A.S.R. 576.

[5] *State* v. *Vanisdal*, 131 Ind. 388, 31 N.E. 79, 15 L.R.A. 832.

It should be kept in mind, however, that silence will not be construed as acquiescence under all circumstances. Where the statutes require affirmative action on the part of a majority of the board or a majority of those present, the measure under consideration must be positively supported by the required majority. A refusal to vote will not be considered as affirmative action.[1]

EFFECT OF BLANK BALLOTS

The courts have frequently been called upon to determine the effect of blank ballots cast at an election. The weight of authority is that such ballots are a nullity. They cannot be counted for or against any candidate; nor are they to be counted in estimating the total number of ballots cast at an election.[2] The very nature of a vote is that it be an expression of a choice of candidates or measures. One who casts a blank ballot merely registers his refusal to vote, and the only importance which attaches to such a ballot is that it reveals an intent to concur in whatever measure may be determined upon by those actually voting.

In the case of *Attorney-General* v. *Bickford*,[3] as an illustration, a school committee met to elect a superintendent of public instruction for the city. The result of the ballot was: C. W. Bickford, five votes; John Smith, two votes; John Doe, one vote; and two votes were blank. The chairman declared that no election had taken place, but Bickford claimed the office. The court sustained Bickford's contention because the blank ballots were not expressive of a choice and were without effect in determining the result of the contest.

The argument that such a ballot indicates a purpose of the voter to register his refusal to vote for the successful candidate overlooks that it is just as indicative of his purpose to concur in the result which the regular ballots disclose. It is difficult to see how it has any more effect upon the result than a refusal to vote, which is regarded, so far as it is important, as an acquiescence in the result. It has no negative effect. What the voter's purpose was is not apparent.

[1] *Somers* v. *Bridefort*, 60 Conn. 521.

[2] *Murdock* v. *Strange*, 99 Md. 89, 3 Ann. Cas. 66; *Attorney-General* v. *Bickford*, 77 N.H. 433, 92 Atl. 835, Ann. Cas. 1913B 119; *Hicks* v. *Kinghaum*, 13 Ariz. 237, 108 Pac. 482; *People* v. *Samsalito*, 106 Cal. 500, 39 Pac. 937; *Cashman* v. *Salem*, 213 Mass. 153, 100 N.E. 58; *Battle Creek Brewing Co.* v. *Calhoun County*, 166 Mich. 52, Ann. Cas. 1912D 946, 131 N.W. 160; *State* v. *Roper*, 47 Neb. 417, 66 N.W. 539.

[3] *Attorney-General* v. *Bickford*, 77 N.H. 433, 92 Atl. 835, Ann. Cas. 1913B 119.

To the same effect is the opinion of the court in the case of *Murdock* v. *Strange*.[1] The mayor and the city council of Annapolis, Maryland, voted to elect a market master. Strange received four votes, Murdock three, and there was one blank ballot. The court held that Strange had been elected because at common law a blank ballot is not to be counted in estimating the number of ballots cast. To call a blank piece of paper a ballot would be a misnomer. "It is in fact nothing; it cannot be expressive of any intention; no rule or method of interpretation can relieve it of its dumbness."

In two jurisdictions a contrary rule seems to hold. It has been held in Minnesota that, where the law requires a majority of the "votes cast" in order to carry a proposition, blank ballots must be considered in determining the fact of majority.[2] So, too, in Ohio, "if it is required by law that a majority, or any certain proportion of the votes cast at the election, should be in favor of a proposition in order that it should carry, then all the votes cast at the election, including blank and unintelligible ballots, must be considered."[3]

RIGHT TO RESCIND ACTION

At any time before rights to third parties have vested, a board of education has authority to rescind any action which it may have taken. Where, for example, the inhabitants of a district vote to raise money for the erection of a schoolhouse, they have the right to rescind the vote at their discretion at any time prior to the levy of the taxes.[4] It has been held, too, that a resolution adopting a uniform system of schoolbooks may be rescinded at the same session at which the original vote was taken.[5] In Massachusetts it has been held that the election of a superintendent of schools may be rescinded at an adjourned meeting which was in legal effect a continuation of the original meeting.[6] It seems, however, that in this case the superintendent was never notified of his election. Moreover, the revoca-

[1] *Murdock* v. *Strange*, 99 Md. 89, 3 Ann. Cas. 66.

[2] *Smith* v. *Renville County*, 64 Minn. 16, 65 N.W. 596.

[3] *Wellsville* v. *Connor*, 91 Ohio St. 28, 109 N.E. 526. See also *State* v. *Chapman*, 44 Conn. 595.

[4] *Pond* v. *Negus*, 3 Mass. 230, 3 Am. Dec. 131.

[5] *State* v. *Womack*, 4 Wash. 19, 29 Pac. 937.

[6] *Reed* v. *Barton*, 176 Mass. 473, 57 N.E. 961.

tion of a former action need not be formal nor done in express terms. The doing of an act wholly inconsistent with an earlier act constitutes a valid revocation.[1]

BINDING FORCE OF BOARD RULES UPON BOARD ITSELF

The regulations and by-laws of a board of education made under statutory authority have the force of law and are binding even upon the board itself where rights to third parties have accrued.[2] A case in point is that of *United States ex rel. Denny* v. *Callahan*.[3] Under a rule of the board of education of the District of Columbia, a teacher might be granted a leave of absence for a year provided she filed a pledge with the superintendent to teach in the schools of the district for a period of at least two years after the expiration of the leave of absence. The board of education granted a leave of absence to one Otelia Cromwell in order that she might pursue a course of study in Yale University. She failed to file the required pledge but was assured by the assistant superintendent that she would be permitted to return to her position. The teacher next on the eligible list claimed that this failure to file a pledge as the rule required created a vacancy in the position held by Otelia Cromwell and sought a writ of mandamus requiring the board to appoint her to the place thus made vacant. The writ was granted by the Court of Appeals of the District of Columbia for the following reasons.

> While it may be conceded that the board might exercise the power of appointment in any reasonable manner it might deem proper to adopt, it has in its wisdom elected to exercise this power through certain rules and regulations which it has adopted and promulgated. Being empowered by the act of Congress to make such rules and regulations, they must be deemed to have the force and effect of law, unless they are in conflict with express statutory provisions. In other words, they are binding upon the respondents in the matter of appointing and promoting teachers. . . . .
>
> We think that, if the rules of the board are to be given the force of law, a teacher, obtaining a leave of absence to pursue a postgraduate course of training, must comply strictly with the letter of the rule, in order to retain her position in competition against others who would otherwise be entitled to the position vacated.

[1] *George* v. *School District in Mendon*, 47 Mass. (6 Metc.) 497.

[2] *Montenegro-Riehm Music Company* v. *Board of Education*, 147 Ky. 720, 145 S.W. 740; *United States ex rel. Denny* v. *Callahan*, 294 Fed. 992.

[3] *United States ex rel. Denny* v. *Callahan*, 294 Fed. 992.

The assistant superintendent, moreover, had no authority to ignore the rules of the board, "nor indeed could the board itself abrogate its own rule, to meet the exigencies of a single case, and certainly not to the detriment of a right which had accrued."

The same position has been taken by the Court of Appeals of Kentucky.[1] The Board of Education of the city of Louisville adopted a rule that no purchase of supplies should be made in excess of five hundred dollars except upon bids previously advertised for and accepted. Notwithstanding this rule, a contract was entered into for the purchase of pianos to the amount of twenty-five hundred dollars without any bids having been received. Later the board refused to execute the contract. Said the court:

> We are only concerned with the effect of the rules and by-laws adopted by public corporations to enable them better to carry out the purpose of their creation and existence, and we have no doubt that the material reasonable rules and by-laws of a public corporation made and adopted in pursuance of legislative authority and within the scope of the powers of the public corporation to aid it in the discharge of its public duties have the same binding force and effect upon it and all third persons with whom it does business as the statute under which it derives its powers.

The court pointed out, moreover, that persons dealing with a municipal corporation are bound at their peril to know that all contracts must be made in the mode appointed by the charter and ordinances. If they fail to observe the rules and regulations of a school board, for example, they must suffer the consequences.

The same principle of law was involved where a board of education refused to grant a high-school diploma to a pupil who would not wear a cap and gown at the graduating exercises, as the board required. In issuing a writ of mandamus that the diploma be granted, the court pointed out that the board had prescribed an approved course of study and had provided that the honors of graduation and diplomas should be conferred upon all who completed it. Since the rules established by the board became the law for the government of the school, the board, under its own rule, would be compelled to grant a diploma to any pupil who had met the requirements. It

[1] *Montenegro-Riehm Music Company* v. *Board of Education*, 147 Ky. 720, 145 S.W. 740.

should be added, perhaps, that the rule with respect to the wearing of caps and gowns was held unreasonable and therefore void.[1]

It has been held, however, that, under certain conditions, a board may ignore its own rules and regulations. This may be done, it seems, where no rights have accrued to third parties or where the rule has to do merely with parliamentary procedure.[2] In the case of *Weatherly* v. *Mayor of the City of Chattanooga*,[3] it was held, for example, that, although a rule was in force requiring all applications for teaching positions in the schools to be made in writing, the unanimous election of a teacher who had made no such application was valid. If the board saw fit by unanimous vote to ignore the rule, it could not later repudiate the contract because the rule had not been complied with. In a somewhat similar case,[4] the Board of Education of the city of San Francisco had a regulation that any rule adopted by the board might be amended or repealed by the affirmative vote of three members, provided notice in writing of such intended amendment or repeal had been given at a previous meeting. This regulation was ignored in amending a rule relating to teachers' absences. The court held that the rule in question was merely one of parliamentary procedure and might be suspended as occasion required. In any event, the board members alone had the right to complain. In Kansas a board rule read: "At the regular meeting in March of

[1] *Valentine* v. *Independent School District*, 191 Ia. 1100, 183 N.W. 434, 48 S.W. 136.

[2] While the weight of authority seems to be that a municipal board may ignore its rules of procedure, there is considerable disagreement among the courts with respect to this rule of law. In the case of *Territory* v. *Dondero*, 21 Hawaii 19, Ann. Cas. 1914D 1192, it was said: "It is almost uniformly held that a municipal board may waive or suspend its rules of procedure. Such waiver may be brought about either by formal action on the part of the board or by ignoring the rules without objection. If an ordinance is passed without violation of statutory requirements, but in violation merely of a rule of procedure, it will not be held invalid for that reason. 28 Cyc. 333, *Sedalia* v. *Scott*, 1104 Mo. App. 595, 78 S.W. 276." To the same general effect are the following cases: *State* v. *Pinkerman*, 63 Conn. 176, 28 Atl. 110, 22 L.R.A. 653; *Wheelock* v. *Lowell*, 196 Mass. 220, 81 N.E. 977, 124 A.S.R. 543, 12 Ann. Cas. 1109. In the case of *Hicks* v. *Long Branch Commission*, 69 N.J.L. 380, 55 Atl. 250, the opposite position was taken. A rule adopted to the effect that the "yeas" and "nays" should be taken on every vote relating to any special appropriation was held to be as binding upon the commission and its members as any statute or law of the commonwealth. See also *Swindell* v. *State ex rel. Maxey*, 143 Ind. 153, 42 N.E. 528, 35 L.R.A. 50.

[3] *Weatherly* v. *Mayor of the City of Chattanooga*, 48 S.W. 136.

[4] *Grosjean* v. *Board of Education*, 40 Cal. App. 434, 181 Pac. 113.

each year the board of education shall elect by ballot, a superintendent of schools." At a special meeting in February a superintendent was elected on a motion and not by ballot. In holding the election valid, the court said:

> It would be carrying technicalities to the extreme, however, to hold that a board of education might not by common consent waive its rule requiring an election of a superintendent to be held by ballot, and signify its choice by a call of the members and recording their votes. . . . . Nor would it do, we think, to say that the election of a superintendent at a meeting of the board called for that purpose should be held invalid merely because the board had previously adopted a rule fixing a regular and later meeting as the time for selecting a superintendent.[1]

EFFECT OF STATUTE PRESCRIBING TIME FOR TAKING SPECIFIC ACTION

Not infrequently a statute provides that school boards shall take certain action on or before a stipulated date. As a rule, such statutes are regarded as directory only, and, unless there is some provision expressly prohibiting the taking of the action in question after the expiration of the prescribed date, a board may act within any reasonable time.[2] A Pennsylvania statute, for example, required school directors to levy the annual tax for school purposes on or before the first Monday in May. In a case[3] testing the authority of the directors to levy the tax at a later date, the supreme court used the following language:

> Here is a positive duty, enjoined by express legislative enactment. The school directors of Rush township were enjoined, by law, to levy the tax on or before the first Monday in May. The Act of the Assembly is directory as to the time, and if by accident, or from other cause, this duty was omitted, it could be performed in any reasonable time thereafter.

Substantially the same issue came before the same court in a later case,[4] wherein it was said:

[1] *State ex rel. Hill* v. *Sinclair*, 175 Pac. 41, 103 Kan. 480.

[2] *Walker* v. *Edmonds*, 197 Pa. St. 645, 47 Atl. 867; *Gerhart* v. *Dixon*, 1 Pa. St. 224; *Wampler* v. *State*, 148 Ind. 537, 47 N.E. 1068, 38 L.R.A. 827; *Sackett* v. *State*, 74 Ind. 486. See also *State* v. *Smith*, 22 Minn. 218; *People* v. *Allen*, 6 Wend. (N. Y.) 486. For contrary opinion, see *State* v. *Cones*, 15 Neb. 444, 19 N.W. 682; *Willard* v. *Pike*, 59 Vt. 202, 9 Atl. 907.

[3] *Gerhart* v. *Dixon*, 1 Pa. St. 224.

[4] *Walker* v. *Edmonds*, 197 Pa. St. 645, 47 Atl. 867.

> Where action is required to be taken within a certain time, the mere failure of an officer or body to act within the set time is not fatal, and the requirement as to time may be held to be directory. . . . . In the statute under consideration there were no negative words, and the general rule is, that when such a provision in regard to the time when an act is to be performed is introduced, unless there are negative words in the statute providing that action shall not be taken afterwards, such a provision is to be taken as directory.

In the case of *Hendershot* v. *State*,[1] the Supreme Court of Indiana said:

> For the most excellent reason, it seems to be held by the courts everywhere that, when a duty is imposed by statute upon public officers which affects the rights or duties of others, and the time of its performance designated, the officers will not be relieved of the duty by their failure to perform on the date specified, unless the language of the statute is such that the designated time must be accepted as a limitation of the officers' power. In the absence of words of limitation, the prescribed time of performance will be regarded as directory only, and the duty to perform a continuing one subject to mandamus, by the party in interest, within a reasonable period.

The mandatory part of such statutes is that action be taken, whereas the time of taking the action is directory only. Obviously, public policy commonly demands that the prescribed action be taken. While the law-making body may desire that it be taken within certain time limits, to hold that it must be taken within those limits or not at all would often prove socially disastrous.

ADJOURNMENT OF MEETING

Like all similar bodies, a school board has the power, if unrestricted by statute, to adjourn a regular meeting to such time and place as it deems expedient, and, unless such adjournment is an abuse of power, it is not subject to review.[2] Difficulty sometimes arises, however, as to what constitutes adjournment. "An adjournment is an act, not a declaration. It is an act of separation and departure, and, until this takes place the adjournment is not complete."[3] In the case of *Gallagher* v. *School Township of Willow*,[4] a

[1] *Hendershot* v. *State*, 162 Ind. 69, 69 N.E. 679.

[2] *People ex rel. Scott* v. *Nelson*, 252 Ill. 514, 96 N.E. 107; *Donough* v. *Dewey*, 82 Mich. 309, 46 N.W. 782.

[3] *Beatle* v. *Roberts*, 156 Ia. 575, 137 N.W. 1006.

[4] *Gallagher* v. *School Township of Willow*, 173 Ia. 610, 154 N.W. 437.

motion to adjourn had been passed and one or two of the members may have departed, although a quorum still remained. Those remaining prepared a notice of an election, and the court sustained their action. Similarly, it has been held that, although an adjournment of court had been announced and the judges had risen to go, the court was still in session and could receive a verdict.[1] Nor does the fact that one-half of the members of a board refuse longer to participate in the meeting constitute an adjournment if they remain in the room where the business is being transacted. In an Indiana case, six township trustees met on the first Monday in June, as provided by statute, to elect a county superintendent of schools. They balloted 236 times without consummating an election, and at midnight three of the trustees withdrew and joined the group of spectators in the room. Three votes were then cast for one candidate, and he was declared elected. The legality of the proceeding was tested in the supreme court, which held that the three trustees who attempted to withdraw were still present. They could not change from trustees to mere spectators so long as they remained in the room and had an opportunity to vote. Nor did the arrival of the hour of midnight operate *ipso facto* to work an adjournment.[2]

[*To be concluded*]

[1] *Persons* v. *Neigh*, 52 Pa. 199.

[2] *State* v. *Vanisdal*, 131 Ind. 388, 31 N.E. 79, 15 L.R.A. 832.

CERTAIN ARITHMETIC ABILITIES OF SECOND-GRADE PUPILS

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The work in arithmetic may be divided into three different phases: (1) the teaching of the basic facts used in computation, (2) the teaching of the processes involving the manipulation of these facts, and (3) the teaching of the use of arithmetic or quantitative facts and processes in situations that arise in life.

The work of the first and second grades is usually concerned with the teaching of the fundamental facts in addition and subtraction, although there are schools which also teach some multiplication and division in these grades. The work of the elementary grades is chiefly concerned with the establishment of the abilities necessary for the manipulation of the fundamental facts in arithmetic processes. For example, the teaching of the basic facts in addition must be followed by instruction in column addition and in the addition involved in multiplication. Osburn has pointed out that teachers usually omit many of the important basic skills and that, as a direct consequence, the work in the processes is deficient.[1]

Clapp and others have made investigations of the relative difficulty of the basic facts in the four fundamental processes and report wide variations in their difficulty in all grades.[2] Their reports are based on tests given to large groups of children in different schools in the Middle West. The procedure used in securing the data was to have the teacher state the combinations and to require the pupils to write only the answers on prepared sheets of paper. While this procedure is somewhat different from the usual practice, re-checks show that similar results are secured when pupils are required to write the

[1] W. J. Osburn, *Corrective Arithmetic*. Boston: Houghton Mifflin Co., 1924.

[2] Frank L. Clapp, *The Number Combinations: Their Relative Difficulty and the Frequency of Their Appearance in Text-Books*. Bureau of Educational Research Bulletin No. 2. Madison, Wisconsin: University of Wisconsin, 1924.

answers when the combinations are given to them in printed form rather than presented orally, although the range of error is not as great and the percentage of error on a combination is not as large.

Various methods have been developed for the teaching of the facts of arithmetic, but, as a whole, the results secured have not been satisfactory. This is clear from the results of tests given in the grades which usually show a larger percentage of error on even the easier phases of arithmetic and marked weaknesses in the processes. It has been advocated by some writers that the teaching of arithmetic should be delayed until the fourth or fifth grade, since experiments show that the results secured when this is done are at least equal to the results secured when the teaching of arithmetic is begun in the primary grades.

There is little evidence with regard to the results of teaching the basic facts in the primary grades. Meyers shows that errors made in learning a basic fact tend to persist.[1] There is little evidence with regard to the relative difficulty of teaching the fundamental facts in the four processes, although it appears to be the consensus of opinion among teachers that subtraction presents the greatest difficulty. At present there is a marked difference of opinion as to the method that should be used in teaching subtraction, and there is no conclusive evidence of the superiority of any method.

Because of the complexity and the abstractness of the subject as it is usually taught, arithmetic has always been considered a subject in which there must be special stress on review work. The review has always been a marked feature of the work done after a vacation period or at the beginning of a new grade. It has been observed that in the primary grades emphasis is laid on the development of number facts and on repeated review. Little thought has been given to the possible waste that may occur because of unnecessary drill on facts with which the child is already familiar. The waste in spelling drill has been clearly pointed out by Horn and others.[2] Methods of teach-

[1] G. C. Myers, "Persistence of Errors in Arithmetic," *Journal of Educational Research*, X (June, 1924), 19–28.

[2] Ernest Horn, "Principles of Method in Teaching Spelling, As Derived from Scientific Investigation," *Fourth Report of the Committee on Economy of Time in Education*, pp. 52–77. Eighteenth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1919.

ing arithmetic have been developed which eliminate much of the waste through pretests and individual drill on the difficulties revealed by these pretests. The factor of speed in re-learning after a period of disuse has not been investigated to any extent in the case of arithmetic. The recognition of this factor in itself should result in a readjustment of the drill period so as to produce marked economy of time.

In order to secure data on the effectiveness of the teaching of arithmetic in the first two grades of the Minneapolis schools, pupils in Grades II B and II A selected at random from eight schools were given three tests on the basic facts in addition and subtraction. The first test was given at the close of school in June, 1925. The second test was given on the day school opened in September; the third test, two weeks later. In this way it was possible to secure evidence with regard to the effect of the summer vacation on the retention of knowledge possessed in June and also on the improvement made during the first two weeks of the school year. The pupils in Grade II B were tested on the sixty-four addition combinations the sums of which are 10 or less and on the sixty-four subtraction combinations with minuends of 10 or less, the basic work of Grade II B. The pupils in Grade II A were tested on the one hundred addition facts and on the one hundred subtraction facts, the basic work of Grade II A.

The combinations were mimeographed in random order. Each child was given a sheet containing the facts of the process on which he was to be tested. The teacher then directed the pupils to write the answers on the papers. There was no time limit. The tests in addition and subtraction were given on consecutive days, since it was felt that tests of both processes in one day might introduce the factor of fatigue. When the tests were completed, the papers were collected and sent to the research bureau.

After the papers for the three different tests had been scored, all papers of pupils who were not present for the three tests on a process were discarded. The data presented in this report are therefore based on the results of three tests given to the same pupils. All pupils who attended summer school for remedial work were eliminated from the group. Their scores were tabulated for comparative purposes and are included in this report. No attempt was made to con-

sider any other type of experience which the children might have had during the summer, since it was obviously an almost impossible undertaking. There are, therefore, two groups of pupils for whom data are available: (1) a group of pupils who took the three tests but who did not attend summer school and (2) a small group of pupils who took the three tests and who attended summer school.

The results of the three tests in addition and subtraction for the pupils in Grade II B are given in Table I. This table includes data for boys and girls separately and combined and also data for the small summer-school group.

TABLE I

MEDIAN SCORES IN ARITHMETIC TESTS—GRADE II B

	Number of Pupils	June 17	September 9	September 23
Addition:				
Boys	94	62.0	61.2	61.9
Girls	83	62.3	61.5	61.9
Total	177	62.1	61.3	61.9
Summer-school pupils	15	61.4	58.7	61.1
Subtraction:				
Boys	89	61.8	58.2	60.8
Girls	80	62.2	60.4	61.7
Total	169	61.9	59.5	61.2
Summer-school pupils	15	61.2	52.5	55.8

A comparison of the results for the three tests in addition shows that the medians were practically the same. Apparently, there is almost no loss in ability during the summer in the phase of addition here tested. The results for the boys and the girls were about the same. The group of children who attended summer school showed a decrease of 2.7 combinations from June 17 to September 9, but by September 23 the summer-school group was practically equal in ability to the regular group.

The results for subtraction were practically the same as the results for addition, although the difference between the June 17 score and the September 9 score is slightly greater for subtraction than for addition, amounting to 2.4 for subtraction as compared with 0.8 for addition. By September 23 the results in both funda-

mentals were almost identical with the June results. The boys lost somewhat more in subtraction than did the girls. The summer-school group showed a substantial loss in subtraction between June and September, and on September 23 the median score was still considerably below the June median score.

In interpreting these results, one should remember that only the basic number facts were tested. Evidently, there was not only a high degree of accuracy on the part of the group as a whole but also no apparent decrease in ability between June and September in spite of the fact that there was no organized drill during the intervening time. Whatever practice there was in the use of number facts was incidental. Since there was no decrease in ability, it may be assumed that there was a considerable amount of practice. This fact is substantiated by tests which have been given in Minneapolis to first-grade pupils who have had no formal school training in arithmetic but who, nevertheless, show a surprising knowledge of arithmetic facts. Their information must be gained through the ordinary child activities of the playground or the home. It is probable that much of the intensive development of number facts which is a usual part of primary number work is unnecessary because the pupils already possess much of this information. For this reason, the Minneapolis schools are using a pretest technique in teaching arithmetic in the second grade which is a modification of the pretest technique in spelling. Number facts are briefly developed, and the difficulties are determined by means of pretests. These difficulties are made the basis of the subsequent instruction.

The results for Grade II A in the case of the one hundred facts in addition and subtraction show that there was little loss in ability in addition during the summer vacation but considerable loss in ability in subtraction (Table II). There was a decrease in the median score in addition for the whole group from 98.3 on June 17 to 95.8 on September 9, followed by a growth to 96.9 on September 23, or 1.4 points below the June score. In the case of subtraction, the June median for the whole group was 96.0; on September 9 this median dropped to 89.3, or 6.7 points, increasing to 92.6 by September 23, or 3.4 points below the June median. The summer-school group was considerably below the regular group in both addition and

subtraction, the difference being greater in subtraction. The summer-school group even showed a loss in subtraction between September 9 and September 23. There was little difference between the scores for the boys and the girls in the case of addition, although the medians for the boys were slightly below those for the girls. On both June 17 and September 9 the median score in subtraction for the boys was practically the same as the median score for the girls. The results show that the girls made a much greater increase than did the boys in ability in subtraction between September 9 and September 23, the girls' median increasing from 89.2 to 95.5 and the boys' median increasing from 89.3 to only 90.3.

TABLE II

MEDIAN SCORES IN ARITHMETIC TESTS—GRADE II A

	Number of Pupils	June 17	September 9	September 23
Addition:				
Boys	111	96.5	94.4	96.4
Girls	98	99.5	96.8	97.7
Total	209	98.3	95.8	96.9
Summer-school pupils	17	92.0	87.5	91.9
Subtraction:				
Boys	104	95.6	89.3	90.3
Girls	98	96.4	89.2	95.5
Total	202	96.0	89.3	92.6
Summer-school pupils	17	79.0	68.3	67.5

These data show clearly that the skill in addition acquired in the second grade is retained during the summer vacation to a much greater extent than is the skill in subtraction. It is quite clear that the loss in Grade II A was on the more difficult combinations in the two processes. This is in harmony with the findings of Clapp[1] and others, who report a marked increase in the difficulty of addition combinations the sums of which are between 11 and 18 and of subtraction combinations with minuends between 11 and 18. It was these additional facts on which the II A but not the II B classes were tested. There is a need of special review of the more difficult addition and subtraction facts.

[1] Frank L. Clapp, *op. cit.*

The results of the tests were next tabulated according to age groups. Table III shows the results for pupils seven and eight years of age in Grade II B. The median score in June for the seven-year-old pupils was the same as the median score for the eight-year-old pupils. However, the eight-year-old pupils suffered a somewhat greater loss than did the seven-year-old pupils between June 17 and

TABLE III

MEDIAN SCORES OF AGE GROUPS—GRADE II B

	Number of Pupils	June 17	September 9	September 23
Addition:				
Seven years of age:				
Boys	72	62.1	61.3	62.0
Girls	59	62.3	62.0	62.1
Total	131	62.2	61.7	62.0
Eight years of age:				
Boys	16	62.1	60.6	61.8
Girls	22	62.3	60.8	61.7
Total	38	62.2	60.7	61.7
Subtraction:				
Seven years of age:				
Boys	70	63.1	59.3	61.1
Girls	60	63.1	60.8	62.2
Total	130	63.1	60.1	61.7
Eight years of age:				
Boys	14	61.4	50.0	57.5
Girls	19	58.8	47.5	60.4
Total	33	60.1	48.8	59.0

September 9. By September 23 the two groups were practically equal in ability.

The data for subtraction show that the eight-year-old pupils were lower in ability in June than were the seven-year-old pupils. They had a much lower median score on September 9 than did the seven-year-old pupils; they had a lower median score on September 23 also. Evidently, subtraction is much more difficult for eight-year-old children in Grade II B than for seven-year-old children in the same grade. Weakness in subtraction may be largely responsible for

eight-year-old children being in this grade, since failure in arithmetic has been found to be a prominent cause of failure in a grade and consequent over-ageness.

The results for the age groups in Grade II A (Table IV) substantiate in a striking way the results for the age groups in Grade II B. A comparison of the results in the case of addition in Grade

TABLE IV

MEDIAN SCORES OF AGE GROUPS—GRADE II A

	Number of Pupils	June 17	September 9	September 23
Addition:				
Seven years of age:				
Boys	43	97.8	93.7	96.8
Girls	50	100.0	97.5	97.3
Total	93	98.9	95.6	97.1
Eight years of age:				
Boys	52	97.6	94.6	96.5
Girls	39	99.8	96.4	98.2
Total	91	98.7	95.5	97.4
Subtraction:				
Seven years of age:				
Boys	41	97.0	93.5	95.4
Girls	51	96.9	91.6	96.1
Total	92	96.9	92.5	95.8
Eight years of age:				
Boys	49	95.4	88.4	88.2
Girls	39	96.1	85.5	89.6
Total	88	95.8	87.0	88.9

II A shows that there is little difference between the scores made by seven-year-old children and the scores made by eight-year-old children. The results in the case of subtraction, however, show that the pupils who were eight years old were practically equal in ability to the seven-year-old pupils in June but that they had a much lower median score on September 9 and were still much below the seven-year-old pupils on September 23. They showed little improvement during the two weeks and evidently needed considerable practice to bring them up to the June level. It is clear that the eight-year-

old pupils of both Grade II B and Grade II A had a marked weakness in subtraction. This weakness undoubtedly was associated with those factors which resulted in their retardation in school progress. Such factors as intelligence probably play a more important part in the development of ability in subtraction than they do in the development of ability in addition. It is probably true also that there is little opportunity for incidental learning of subtraction facts in the life-activities of children of this grade.

TABLE V

VARIATIONS IN SCORES OF INDIVIDUAL PUPILS

Pupil	Process	June 17	September 9	September 23
Grade II B:				
1	Addition	36	62	64
2	Addition	24	27	44
3	Addition	49	43	62
4	Addition	55	53	55
5	Addition	38	36	33
6	Addition	60	60	62
7	Addition	31	20	17
8	Addition	51	23	22
Grade II A:				
1	Subtraction	52	62	93
2	Subtraction	81	96	100
3	Addition	77	95	93
4	Subtraction	96	97	99
5	Addition	100	99	100
6	Subtraction	90	8	41
7	Subtraction	83	59	55
8	Addition	59	25	91

While group tendencies reveal significant conditions, it is important that individual cases be considered, for classroom practice is a matter of adjustment to individual needs. A consideration of the scores made by pupils selected at random from the two groups reveals some interesting facts.

Table V shows the scores made by eight II B and eight II A pupils on the three tests. For example, Pupil 1 in Grade II B made scores of 36, 62, and 64 on successive trials of the addition test. An examination of the scores made by the individual pupils shows cases in which the scores on the three tests were practically the same—for example, Pupils 4 and 6 in Grade II B and Pupils 4 and 5 in

Grade II A. Some pupils made a steady increase in scores on the three tests—for example, Pupil 2 in Grade II B and Pupil 1 in Grade II A. Some pupils made scores which decreased from test to test—for example, Pupil 8 in Grade II B and Pupil 7 in Grade II A. Some pupils made considerably higher scores in September than in June. Others made considerably lower scores in September than in June; Pupil 6 in Grade II A is a striking example.

These cases suggest the individual differences that must be dealt with by the teacher. While the group averages do not reveal any considerable differences in ability for the group as a whole on the three tests, apparently each child is a problem to be considered apart from the group as a whole. The problem the teacher faces in teaching arithmetic in the second grade is a complicated one. The great range in ability among the pupils suggests the need of pretests on the basis of which to classify pupils into ability groups. These groups may shift from day to day as the pupils progress in ability. Some plan of individualizing instruction in primary arithmetic, such as is used in Winnetka and Minneapolis, is an essential part of a program of improving the teaching of arithmetic in the lower grades. Many primary-grade pupils already possess a large body of arithmetical knowledge secured through incidental learning. This fact is the justification of a pretest or a series of pretests containing sets of fundamental facts. On the basis of these pretests work can be adapted to individual needs. The high degree of accuracy of most pupils revealed by these test results will show that their chief need is well-motivated drill to automatize the responses. Others who are deficient will need special remedial work to establish correct responses. These pretests should be used at all times, especially, however, at the beginning of the school year. It is probable that they can also be used to good advantage in other than the primary grades.

CONCLUSIONS

1. Data are presented which show that there was practically no decrease in ability to write the sums of the addition facts in Grades II B and II A between June and the beginning of school in September as measured by the median scores for the group. However, there were marked differences in the scores for individual pupils on the three successive tests here reported.

2. There was a considerable decrease in the ability of II B and II A pupils to write the differences for the basic subtraction facts from June to the beginning of school in September. The decrease was greatest for the special summer-school groups. There was some improvement in ability during the two following weeks for the regular groups as a whole.

3. There was little difference between the ability of the boys and the ability of the girls in either process.

4. There was little difference between the seven-year-old pupils and the eight-year-old pupils in Grade II B in ability in addition and subtraction. There was practically no difference between the ability of the seven-year-old pupils and the ability of the eight-year-old pupils in Grade II A in addition, but there was a marked difference in subtraction, the eight-year-old pupils scoring much lower on the whole than the seven-year-old pupils.

5. Pretests should be used as a basis for grouping children in primary arithmetic according to their ability.

COMPARATIVE STUDY OF THE RESULTS IN SILENT READING IN THE SEVENTH AND EIGHTH GRADES IN ELEMENTARY AND INTERMEDIATE SCHOOLS OF DETROIT

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One main factor which has led to the general adoption of the junior high school or intermediate school has been the belief that much of the work traditionally required in the seventh and eighth grades consists of unnecessary reviews and relearning or overlearning of subject matter already sufficiently well mastered. Experimental evidence to support this belief has been reported from time to time.

TABLE I

NUMBER OF MINUTES A WEEK DEVOTED TO ENGLISH IN THE SEVENTH AND EIGHTH GRADES IN THE ELEMENTARY AND INTERMEDIATE SCHOOLS

	Elementary Schools		Intermediate Schools	
	Seventh Grade	Eighth Grade	Seventh Grade	Eighth Grade
Reading	100	100	.....	.....
Composition, grammar, and spelling	400	400	150	120
Library	60	60	.....	.....
Literature	.....	.....	150	120
Total	560	560	300	240

A comparison of results in silent reading in the intermediate and elementary schools of Detroit provides additional evidence along this line.

About 37 per cent of the seventh- and eighth-grade pupils in Detroit are in the intermediate schools. The rest are in elementary schools organized on the traditional basis. Both types of schools contain pupils representative of the various districts in the city. When the intermediate schools were organized, considerably less time was assigned to English (grammar, composition, literature, and silent

reading) in these schools than in the traditional elementary schools. Table I shows the time allotted to English in each type of school. No instruction in silent reading is given in the intermediate schools except that which is given incidentally in all subjects, especially in social science, as a phase of supervised study.

TABLE II

POINT SCORES ON PARKER-DETROIT SILENT READING TESTS MADE BY PUPILS IN ELEMENTARY AND INTERMEDIATE SCHOOLS WHO WERE IN GRADE VII B IN SEPTEMBER, 1924

Date	Elementary Schools	Intermediate Schools
October, 1924	524	566
January, 1925	655	589
February, 1925	618	633
May, 1925	744	707
September, 1925	686	742
January, 1926	827	823
February, 1926	791	788

TABLE III

POINT SCORES ON PARKER-DETROIT SILENT READING TESTS MADE BY PUPILS IN ELEMENTARY AND INTERMEDIATE SCHOOLS WHO WERE IN GRADE VII A IN SEPTEMBER, 1924

Date	Elementary Schools	Intermediate Schools
October, 1924	621	661
January, 1925	706	725
February, 1925	692	702
May, 1925	794	734
September, 1925	776	762
January, 1926	882	828

A continuous survey of the instructional product of the Detroit schools is maintained by the Department of Research. The Parker-Detroit Silent Reading Tests are used in testing silent reading and are given as initial and final tests each semester. They are given in such a way that the results in the elementary and intermediate schools are exactly comparable.

Table II shows the results of successive silent-reading tests given

to pupils in the elementary and intermediate schools who were in Grade VII B in September, 1924. Tables III and IV show similar results for pupils who were in Grade VII A in September, 1924, and pupils who were in Grade VII B in February, 1925, respectively.

TABLE IV

POINT SCORES ON PARKER-DETROIT SILENT READING TESTS MADE BY PUPILS IN ELEMENTARY AND INTERMEDIATE SCHOOLS WHO WERE IN GRADE VII B IN FEBRUARY, 1925

Date	Elementary Schools	Intermediate Schools
February, 1925	541	588
May, 1925	669	680
September, 1925	610	652
January, 1926	777	792
February, 1926	724	729

CONCLUSIONS

1. The smaller amount of time devoted to the general subject of reading as a tool in the seventh and eighth grades in the intermediate schools of Detroit does not impair achievement in that subject.

2. The amount of growth in silent-reading ability is approximately the same for elementary schools and intermediate schools.

KINDERGARTEN-PRIMARY UNIFICATION

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The purpose of this article is to register a plea for the unification of the kindergarten and the primary grades. During the last ten years the unification of the kindergarten and the first grade has become widespread and extremely popular. It has become so popular that today we find the kindergarten and the first grade isolated from the second and third grades in many schools. The writer questions the value of any unification movement that bridges one gap and opens a new one. Is the new gap between the first grade and the second grade necessary? Cannot unification be pushed upward so that there is no break in the child's educational path?

Formerly, the transition from the first to the second grade was almost imperceptible. The environment, the curriculum, and the methods were practically the same. The essential social skills—reading, writing, and number—were emphasized. The break was then between the kindergarten and the first grade. Terman states, "The kindergarten alone holds aloof, worships at the shrine of a special methodological cult, and treats its children as belonging to a different order of human beings."[1] The kindergarten emphasized socialized experiences for pure enjoyment. These experiences were obtained through plays and games, nature study, construction, drawing, etc.

Today the gap between the first grade and the second grade is perceptible because the unification pendulum has not swung forward far enough. We have unified the kindergarten and the first grade but have created a new gap between the first grade and the higher primary grades. The kindergarten teacher has acquired a forward vision; the first-grade teacher, a backward vision. The kindergarten idealism and the essential social skills have been co-ordinated in the

[1] Lewis M. Terman, *The Intelligence of School Children*, p. 32. Boston: Houghton Mifflin Co., 1919.

kindergarten and the first grade. The unification pendulum was given momentum by the earnest efforts of Alice Temple[1] and Patty Hill.

The first-grade teacher must have not only a backward vision but also a forward vision. She must maintain an open-minded friendship with the second-grade situation. She must not become so enthusiastic over the new-found friends in the kindergarten that her old friends in the second grade are forgotten.

Recently the writer heard a first-grade child ask his mother who the second-grade teacher was. After his mother had told him that Miss B was the second-grade teacher, he said, "Why don't I know her? I knew Miss A before I came to first grade. She used to play with us in the kindergarten, and she even called me by my name."

The mother's answer was, "Miss B has no time to play. She teaches big second-grade boys how to read, write, and figure." The child protested that he would rather play with Miss A and began an enthusiastic description of a new game he had learned.

While it is true that the first-grade teacher must have a forward vision, the second-grade teacher must have a backward vision. She must remember that the first-grade children are not accustomed to stern, formal, autocratic teaching. She must bring more enjoyment into the lives of the children. How can this be done?

This can be done, first, by creating the proper environment in the second-grade room. The kindergarten and the first-grade rooms are attractive and exceedingly homelike. The equipment is modern. The furniture is movable. Building materials and modeling mediums are evident invitations to enter into interesting activities. How different from the equipment of the second-grade room!

A second-grade child analyzed the situation in this way: "Mother, I guess the reason we don't have any fun in the second grade is the desks. They are fastened down to the floor so that we can't pull them back to play the stories we read. We can't build stores, either."

Mother mentioned the sand-table that she had seen in the corner of the schoolroom. She was informed that it was not large enough for more than one child to play in. The first child to finish his lesson could play there. The other children never had a chance.

[1] S. C. Parker and Alice Temple, "Unified Kindergarten and First-Grade Teaching," *Elementary School Journal*, XXIV (September, 1923, to March, 1924).

Environment counts. Has the second-grade teacher put forth enough effort to bridge the gap between the first-grade equipment and the second-grade equipment? The answer is, "No." At least a few rows of desks can be replaced by some extra tables altered to suit the size of the children. The first-grade room can be used for an occasional relaxation period.

A modification of the formal curriculum is a second essential in bridging the new gap between the first and second grades. The trite but true saying, "All work and no play makes Jack a dull boy," has been remembered in the first grade but forgotten in the second. In the first-grade program we find a generous amount of time allotted to self-chosen activity, free play, supervised occupation relating to community-life projects, nature interests, etc. The second-grade program consists of reading, writing, number, spelling, and English. One class reads with the teacher while the other class at the desks answers "Yes"-and-"No" questions about a story previously read. One class recites number with the teacher while the other class works problems on paper at the desks. How much more ideal it would be for the children to solve problems through their constructive activities! This was done in the first grade. It is true that now more time is needed for drill, but surely not all the time is needed. The constructive activities offer natural possibilities for arithmetical reasoning.

During the English period the second-grade teacher puts forth great effort to get the children to use good English. How different this drudgery period is from the conversation period in the first grade when the children brought in interesting toys and pets to share with the group! The kindergarten–first-grade curriculum needs adaptation because of pupil maturity, but it does not need absolute change in the second grade. The writer believes that the curriculum of the second and third grades should be worked out with the aid of the kindergarten and first-grade teachers. The present tendency of kindergarten and first-grade teachers to organize for curriculum construction will never bridge the gap between the first and second grades.

Besides the proper environment and modification of the formal curriculum, there is a third essential. There must be no evident change in methods between the first and the second grades. The

methods must be informal in the second grade as well as in the first grade. The methods depend largely on the teacher's attitude. If she is of the old school of the three R's, she will dish out spoonfuls of information to her victims. A pleasant environment and a modified curriculum will be useless in bridging the gap if formal methods are used. If the second-grade teacher visits often in the first grade, she will absorb the idea of pupil activity versus teacher activity, informality versus routine, in the teaching of the three R's.

If the gap between the first and the second grades is bridged, will a new gap appear between the second and the third grades? Probably not. The gap between the kindergarten and the first grade was a great one; the gap between the first and the second grades is not so great, but it is a gap nevertheless. The first-grade teachers have been so enthusiastic over the new-found pleasure of uniting kindergarten idealism and the essential social skills that they have neglected to give the unification pendulum a push forward. When they awaken to their neglect, their push will give the pendulum enough momentum for it to swing itself onward through the grades.

The writer wishes to make a final plea against overworking the idea of kindergarten–first-grade unification. We should work for kindergarten-primary unification. Much can be done through propaganda at sectional and state conventions. Kindergarten-primary problems should be discussed at one round table instead of two. There should not be a kindergarten–first-grade round table and a separate one for the second and third grades. Kindergarten-primary luncheons should replace the kindergarten–first-grade luncheons. Should not first-grade teachers get acquainted with the second-grade teachers as well as with the kindergarten teachers? Surely the originators of this great unification movement wished to see a kindergarten-primary unification, not a kindergarten–first-grade unification with a separation of the first and second grades.

MISS SMITH AND THE CALF, OR LOGICAL VERSUS PSYCHOLOGICAL

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Little Billy is in the third grade. One fateful day Miss Smith, Billy's teacher, announced that the class would take up the study of the cow. Billy was enthusiastic. Here was a subject after his own heart; his father kept a dairy, and he had just given his son a fine Jersey calf. Now there was something peculiarly interesting about that calf. What it was the world will never know; not that Billy was unwilling to reveal it; on the contrary, he was anxious to do so. In fact, his arm had been waving enthusiastically for several seconds.

"What is it William?"

"Why --- Why --- my calf has ---"

"Just a minute, William, we haven't come to that yet. We shall take up calves presently."

Billy would have persisted, for the secret about his calf was indeed interesting. If he could just get it before Miss Smith, she would surely relent; but Miss Smith had hard eyes, and Billy was not an aggressive boy.

Now do not misunderstand me. Miss Smith was a good teacher. In fact, she had a normal-school diploma. For this particular nature-study exercise she had, in addition, a lesson plan; so she could not possibly go astray. The lesson plan was something like this:

1. The cow
   a) Place in animal kingdom
   b) Kinds of
   c) Appearance
   d) Habits
   e) Uses

When Billy injected his irrelevant remark about his calf, the class had just finished "*a*" and was about to consider "*b*," the different kinds of cows. The abortive remark was not without fruit,

however. Miss Smith was a plastic, adaptable teacher. A lesson plan to her was not a sacred, immutable document. Calves, calves—to be sure, she had forgotten calves, and they were frequently associated with cows—in short, a calf might be considered a cow. It has a place in the animal kingdom; there are different kinds of calves; it has an appearance and habits; and it can be used as veal, though, of course, that use, even Miss Smith could see, would discontinue the calf as a calf.

"Let's see, let's see," ruminated Miss Smith, "I will put "Calves" in as a subtopic under "Habits." Surely one could consider having calves as a habit of cows—at least some cows.

The entry was made, and the lesson went on, leaving Billy behind nursing the wounded dignity of himself and calf. Alas, life is fleeting. The class never got to the subtopic under "Habits." There was other ground that had to be covered. However, the calf was in the lesson plan, and that was something. Furthermore, Billy still had his calf, and Billy's calf went right on educating her master just the same as though she had not been snubbed.

It might be of passing interest to examine for a moment the difference between the methods used by these two teachers, Miss Smith and the calf. Being an educated young woman, Miss Smith had been impressed with the value of logic in human behavior. True, she does not concern herself with *analogical inference*, *inductive inference*, and *syllogistic inference*, and she has forgotten whether her normal-school professor's illustration of the syllogism was, "All men are mortal; Socrates is a man; therefore Socrates is mortal;" or, "All men are mortal; Socrates is mortal; therefore Socrates is a man." Let it be said that she has the good sense to admit that these things do not matter much anyway. Yet she is logical and knows how important logic is to human welfare. It is clear to her that ideas are related, that they have an affinity for each other like the molecules of the benzene ring, which Miss Smith could remember from her chemistry course. Leave out a molecule, and the whole structure falls. All this Miss Smith understands. Whether this is a trick the mind plays on the universe, forcing it to adopt its own mold, or whether it is a constraint which the universe lays upon the mind, she has never decided (famous philosophers have worried about that), but she knows the

fact, and, being a conscientious teacher, she proposes to see that her pupils, Billy not excepted, acquire the logical habit—which brings us back to our starting-point.

Now the calf has an advantage over Miss Smith. It has never been to normal school, and it is entirely unaware of these facts about logic. In consequence, it is free to make the psychological approach in educating little Billy. Alicia—that is Miss Smith's first name, and its use will rescue us from too much repetition—has many things to remember and many more to forget in order to do a good job on Billy. On the morning in question she may have forgotten some things she should have remembered. It did not occur to her that with children, as indeed with adults, the logic of events is not always the logic of logic. When small, Alicia had nearly died from drinking a bottle of indigo bluing, thinking it was grape juice. Chemistry happens to people, but it seldom, if ever, happens in the sequence of the chemistry textbook. Alicia had memorized Herbart's law of apperception while in school, and that was an experience quite as much as the bluing episode, though perhaps it did not color her thought quite as effectively as the bluing colored her insides. The important thing, however, is that it never occurred to her to bring the two episodes together and to try to apply them to Billy's case.

The calf has nothing to remember and nothing to forget, so it goes right on educating Billy without let or hindrance. Its method is to make things happen to Billy. Once it tangled him up in a rope and gave him a lesson in—well, it was a combination of "subjects," as experiences usually are. On another occasion it spilled a bucket of milk on him and then terminated the lesson, and Billy's father had to finish it. Of course, what all this really amounts to is that Billy educates himself, with the calf as an active element in the stimulus situation, as the psychologists say.

This is a rôle which Alicia might have essayed with great advantage to Billy and no doubt to herself. She could make some things happen to him which are not included in the bovine repertoire. Let us be generous and say that she does, even though she has forgotten many things. I would not have you think for a moment that Miss Smith could be dispensed with any more than could the calf. Billy needs them both. Nevertheless, it would be well if Miss Smith

would learn something about the psychological method from her colleague the calf, for, alas, the calf will not learn anything from her.

Let us agree with Miss Smith that logic is essential to human welfare. She is right; in this case *deadly* right. Let us note, however, what she overlooked, that a complete logical arrangement of experience belongs to a mature mind, and even then it has no significance unless that mind is engaged in one of two tasks, namely, enlarging and perfecting this system, as in scientific research, or applying parts of the system to the accomplishment of a practical end, such as planning a bridge to carry a railway. Now the important thing for Miss Smith is not the uses of logic but rather how an individual acquires systematic knowledge and systematic thinking. Every day things happen to Billy, leaving certain effects, among which are ideas. When the happenings enlist Billy's interest, the resulting ideas are more vivid and perhaps more numerous. Billy's mind retains them more or less faithfully, which is only another way of saying that the ideas are subject to revival at any time when they are relevant to some new happening the boy is experiencing; or it may be only when he thinks they are relevant. Now that is the way our hero's mind naturally works. What Miss Smith needs to do, then, is to make the happenings which she devises for Billy's welfare dovetail with the happenings the calf has arranged, or, to be accurate, with the residual ideas these events have left. Oh, yes, that is a perfectly logical thing to do, but it is a psychological logic. It is the logic of events, the events in this case being the contingencies which arise for Miss Smith in the interesting daily task of educating Billy. Make no mistake, the failure to proceed by prearranged logical steps which have left Billy out and have allowed no place for contingencies will not be resented by Billy, for, strange as it may seem, a psychological procedure seems very rational to him.

Now there is just one thing more which it is necessary to mention before I conclude this account of one small boy's pedagogical adventures. If logic is essential to human welfare, which we have conceded Miss Smith, and if Billy is to get only the logic of the nine-year-old from both the calf and Miss Alicia, when, then, and how is he ever to find himself possessed of this mature logic? I have not stated my query fairly in every respect. Logic is not a *possession;*

it is an *activity*. If Billy wants a certain kind of activity, all he has to do is to set it going, provided he is capable of it. Now even Miss Smith admits that Billy can think. Then, if she wants him to think logically, all she has to do is to get him to want to. Logical thinking is not an absolute activity; it is genetic, and, while Billy is not capable of advanced degrees of logical thinking, he can, with Miss Smith's help, utilize the thoughts he does have in a better and better way. At no point have I intimated that Miss Smith should excuse her pupil from thinking as logically as his limited experience will permit. My implied invectives have been hurled rather at her attempting to teach Billy subject matter in an order which is not logical to Billy. I feel certain that, if our young friend is helped and encouraged to arrange his experiences in ways which bring out their inherent relationships, which he can see, there will be a gradual improvement in his ability to think systematically. If all the teachers whom he encounters in his perilous journey through the schools are artists in giving such help and encouragement, Billy will ultimately arrive at manhood with the divine gift of logical reason. It is to be piously hoped that, when that time comes, a logical arrangement of ideas will be entirely psychological for him.

SUMMARY OF READING INVESTIGATIONS (JULY 1, 1925, TO JUNE 30, 1926). I

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It is the purpose of this series of articles to present a summary of reading investigations published between July 1, 1925, and June 30, 1926. Two similar summaries have been published in the past. The first was a summary of 436 investigations reported prior to July 1, 1924, which appeared as No. 28 of the Supplementary Educational Monographs published by the Department of Education, the University of Chicago. The second was a summary of reading investigations reported between July 1, 1924, and June 30, 1925, which appeared in the February, March, April, and May, 1926, issues of the *Elementary School Journal*. In presenting the following annotated bibliography, the writer has taken the liberty of including a few studies published before July 1, 1925, which did not come to his attention early enough to be included in previous summary reports.

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Emphasizes the importance of teaching pupils to read in content subjects and lists numerous words and expressions in various subjects which pupils should learn to recognize and interpret accurately.

24. GRAY, WILLIAM S.
"Summary of Reading Investigations (July 1, 1924, to June 30, 1925), *Elementary School Journal*, XXVI (February, March, April, May, 1926), 449–59, 507–18, 574–84, 662–73.
Summarizes briefly the findings and conclusions of seventy-three investigations in reading.

25. GREEN, JENNY LIND.
Reading for Fun. Boston: Richard G. Badger, 1925. Pp. 206.
Reports conclusions based on studies carried on among several thousand children to determine what they liked to read and should read. Presents classified lists of books.

26. JORDAN, A. M.
"Children's Interests in Books and Magazines," *Pedagogical Seminary*, XXXII (September, 1925), 455–69.
Reports the results of a study of withdrawals for three months from eight children's libraries and of questionnaire replies from 3,598 children in four cities and towns.

27. JORDAN, A. M.
Children's Interests in Reading. Chapel Hill, North Carolina: University of North Carolina Press, 1926. Pp. 104.
Summarizes earlier investigations of children's interests in reading and presents data supplementing the results of studies made in 1917–18 concerning books and magazines liked best.

28. LARSEN, LAURA MELANA.
"An Objective Method of Selecting Appropriate Geographical Readings for Fourth-Grade Pupils." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.
Reports the results of a study of the relative merits of three methods of determining the reading difficulty of supplementary books in geography.

29. LEHMAN, HARVEY C.
"Reading Books 'Just for Fun,'" *School Review*, XXXIV (May, 1926), 357–64.
Presents the results of a study to determine the amount of independent reading done by members of elementary-school, high-school, and college classes.

30. LIVINGSTON, RALPH.
"The Interrelations of the Vocabularies in Public-School Subjects," *Educational Research Bulletin* (Ohio State University), V (May 12, 1926), 208–13.
Reports the results of a comparison of the Pressey Technical Vocabularies in Public-School Subjects and the Thorndike word list. Shows overlappings in Pressey's various lists.

31. LOWRY, ELLSWORTH.
"A Silent-Reading Experiment in Rural and Village Schools," *Elementary School Journal*, XXVI (September, 1925), 42–49.
Reports the results of experiments in Grades I–VIII, inclusive, in four Indiana cities to determine the effect of timed silent-reading practice for ten weeks, supplemented by drill on phrase and sentence recognition.

32. MCCALL, WILLIAM A., and CRABBS, LELAH MAE.
"Standard Test Lessons in Reading," *Teachers College Record*, XXVII (November, 1925), 183–91.
Describes the purposes of a series of standard test lessons in reading for Grades II–VIII, inclusive. Presents age and grade norms.

33. MCCLURE, WORTH.
"Learning To Read Arithmetic Problems," *Teachers Journal and Abstract*, I (March, 1926), 183–88.
Discusses the "specialized skills" that are essential in reading arithmetic problems intelligently as revealed by scientific studies.

34. MILES, W. R., and SHEN, EUGENE.
"Photographic Recording of Eye Movements in the Reading of Chinese in Vertical and Horizontal Axes: Methods and Preliminary Results," *Journal of Experimental Psychology*, VIII (October, 1925), 344–62.

Reports the results of two experiments with eleven Chinese subjects to determine the nature of eye-movements "in reading short selections of English and horizontal Chinese" and in reading "Chinese texts of vertical and horizontal alignment."

35. MOORE, NELLE ELIZABETH.
"An Analysis of Study Questions Found in Textbooks for the Intermediate Grades." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.
Presents the results of an analysis of study questions and suggestions found in eighteen texts in reading, history, and geography used in Grades IV, V, and VI.

36. MORRISON, A. F.
"The Improvement of Instruction in Reading through Diagnostic and Remedial Measures," *Public School Messenger*, XXIII (January, 1926), 27–37. St. Louis, Missouri: Board of Education.
Describes the effect of diagnostic and remedial measures in Grades II–VII, inclusive, of a public school.

37. O'BRIEN, JOHN ANTHONY.
Reading: Its Psychology and Pedagogy. New York: Century Co., 1926. Pp. xxviii+308.
Summarizes experimental studies that relate to the psychology and pedagogy of reading.

38. PARTRIDGE, CLARA MARTIN.
"Number Needs in Children's Reading Activities," *Elementary School Journal*, XXVI (January, 1926), 357–66.
Reports an illuminating list of mathematical terms and concepts found in readers, geographies, histories, and language books.

39. PEYTON, EDITH M., and PORTER, JAMES P.
"Old and New Methods of Teaching Primary Reading," *Journal of Applied Psychology*, X (June, 1926), 264–76.
Presents the results of a comparative study of the progress made in reading in three schools using traditional methods and of the progress made in three schools using modern methods.

40. PIPER, ROBERT HAROLD.
"The Value of Study before a Recitation as Compared with Study after a Recitation." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.
Reports the results of a series of investigations concerning reading and study procedures in Grades IV–VII, inclusive.

41. POLLOCK, MARTHA C., and PRESSEY, L. C.
"An Investigation of the Mechanical Habits in Reading of Good and Poor Readers," *Educational Research Bulletin* (Ohio State University), IV (September 23, 1925), 273–75.
Presents the results of a comparative study of the characteristics of five pairs of

pupils, the members of each pair being of equal intelligence but differing widely in reading achievement.

42. ROOT, A. R.
"A Survey of Speech Defectives in the Public Elementary Schools of South Dakota." Unpublished Master's thesis, Department of Education, University of Chicago, 1925. A brief report of the study appears in *Elementary School Journal*, XXVI (March, 1926), 531–41.
Reports the frequency of seven types of speech defects among 14,072 elementary-school pupils in South Dakota. Shows the distribution of speech defects among boys and girls and the relation of speech defects to retardation.

43. SCARF, ROBERT C.
"Mathematics Necessary for the Reading of Popular Science." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.
Reports the results of an analysis of scientific magazines, books on science, and scientific articles in popular magazines to determ ne the mathematical words and concepts needed in interpreting easy science material.

44. SCOTT, ROBERT E.
"Flash Cards as a Method of Improving Silent Reading in the Third Grade," *Journal of Educational Method*, V (November, 1925), 102–12.
Discusses the methods and the results of an experiment to determine the effect on rate and comprehension in silent reading of the use of flash cards every day for four weeks.

45. SEVERANCE, HENRY O.
"What Do University Students Read?" *School and Society*, XXIII (June 5, 1926), 726–28.
Summarizes the book withdrawals from the library of the University of Missouri during a period of two weeks and the magazine withdrawals during a period of three weeks.

46. SMITH, NILA B.
"An Investigation in Children's Interests in Different Types of Stories," *Detroit Educational Bulletin*, IX (February, 1926), 3–4.
Reports the results of a study to determine the preferences of eight classes of first-grade pupils for folk tales, nursery rhymes, fables, and realistic materials relating to industry, nature, health, entertainment, and civics.

47. SPRINGSTEED, CLARA B.
"Improving Speed and Comprehension in Reading," *Journal of Educational Method*, V (October, 1925), 48–52.
Reports the results of successful efforts to improve the speed and comprehension of reading of pupils in eighty-five classrooms in Grades IV–VIII, inclusive.

48. TAYLOR, ORVILLE EDGAR.
"An Analysis of the Habits of Study of Superior High-School Students." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.
Describes habits of study reported by twenty-eight superior pupils in two high schools and habits of study observed by the investigator.

49. TERMAN, LEWIS M., and LIMA, MARGARET.
Children's Reading. New York: D. Appleton & Co., 1926. Pp. xii+364.
Discusses reading interests of children and presents lists of books based on an experimental study of "children's reading with special reference to individual differences caused by age, sex, intelligence, and special interests."

50. WASHBURNE, CARLETON.
"A Scientifically Graded Book List for Children," *Teachers Journal and Abstract*, V (January, 1926), 41–46.
Describes briefly the steps taken in a study to determine books appropriate for children of different ages and reading ability. Presents samples of the results.

51. WASHBURNE, CARLETON.
"A Grade-Placement Curriculum Investigation," *Journal of Educational Research*, XIII (April, 1926), 284–92.
Describes the steps taken in efforts to establish criteria for determining the grade placement of books. Presents the results of the use of these criteria.

52. WASHBURNE, CARLETON, and VOGEL, MABEL.
Winnetka Graded Book List. Chicago: American Library Association, 1926. Pp. 286.
Includes a list of approximately seven hundred books approved by children's librarians and reported on favorably by 36,750 children of various ages and degrees of reading ability.

53. WASHBURNE, CARLETON, and VOGEL, MABEL.
"What Books Fit What Children," *School and Society*, XXIII (January 2, 1926), 22–24.
Presents the results of a detailed study involving 36,750 children to determine the "books which are read and enjoyed by children of various ages and degrees of reading ability."

54. WORCESTER, D. A.
"The Ability To Follow Oral and Written Directions," *Educational Research Bulletin* (Ohio State University), IV (September 9, 1925), 250–51.
Reports the results of a study of the ability of 220 college Freshmen to follow directions when presented orally and in writing.

55. YOAKUM, GERALD ALAN.
"What Children Do When They Study," *University of Pittsburgh School of Education Journal*, I (September-October, 1925), 12–16.
Presents the results of a study of the statements made in compositions written by 1,665 pupils in Grades III–IX, inclusive, concerning "What I Do When I Study."

56. YOAKUM, GERALD ALAN, and TRUBY, CHARLOTTE.
"The Effects of Certain Practice Exercises in Reading," *University of Pittsburgh School of Education Journal*, I (January-February, 1926), 60–61.
Describes the results of a controlled experiment with two fifth-grade classes to determine the superiority of certain practice exercises over the ordinary method of teaching reading.

There are two interesting preliminary facts which merit attention. First, there has been a marked improvement during the past year in the quality of the studies published. In general, each study relates to a single specific problem; the data presented are more reliable; and the interpretations are keener and better defended. Second, a relatively large number of investigations of reading in the so-called "content" subjects have been reported. This fact indicates that reading as it relates to the various school subjects and activities is now challenging some of the attention that it has long deserved.

PROFESSIONAL BOOKS

Four important books dealing with the problems of teaching reading were published during the year 1925–26. Two of them are concerned chiefly with the practical problems of the classroom and are not included in the bibliography. They are: *Reading Objectives* by Charles J. Anderson and Isobel Davidson (Laurel Book Company, 1925) and *Teaching Children To Read* by Paul Klapper (D. Appleton and Company, 1926). The former is characterized by two purposes, namely, (1) to define the objectives of reading and of instruction in reading and (2) to indicate valid methods of attaining these objectives. The latter is an earlier edition revised in order to give attention to modern tendencies in the teaching of reading.

The other two professional books are devoted more largely to the presentation of the findings of investigations relating to reading and have therefore been included in the bibliography. The one by Brooks (6), entitled, *The Applied Psychology of Reading*, is "an attempt to interpret and apply briefly in non-technical language the more significant parts of the vast body of material on the psychology of reading." It includes numerous exercises and directions for use in improving both silent and oral reading. The book by O'Brien (37), entitled, *Reading: Its Psychology and Pedagogy*, aims to present "in simple, non-technical language the results of practically all the important recent scientific investigations into the psychological and physiological nature of the reading process that have yielded results of practical consequence."

The four books to which reference has been made present a more or less complete picture of both the practical and the theoretical

problems involved in teaching reading. It is both interesting and significant that the professional books published within a year should present such varied and exhaustive treatments.

LISTS OF BOOKS FOR CHILDREN

A very notable contribution of the year is a number of lists of books for children which have been derived through the use of one or more objective measures. In all the lists referred to here the preferences of children have been given large consideration. This is quite in contrast to the traditional practice of preparing lists entirely on the basis of what adults think children should read. The list by Chamberlain and Carter (9) includes books for high-school pupils. It was compiled by teachers and librarians from a list submitted by two thousand high-school pupils. It therefore includes not only books which have been approved or recommended by teachers and librarians but, what is more significant, "books which have been read and enjoyed by many young people."

The lists of books recommended by Green (25) have been selected after careful studies in which the interests of children in reading were considered. The author rightly maintains that children should read widely "for fun." After presenting facts which show why we should help children read for fun, the author discusses what children should read in geography, science, history, citizenship, and friendship. Very suggestive lists are included, although the justification for specific titles has been omitted.

A third list, which has attracted wide attention, is the one by Terman and Lima (49). Prior to the preparation of this list, the authors studied the reading interests of approximately two thousand children. Data were secured from the home, the school, and the children themselves. These data were statistically treated, and the lists were selected "largely on the basis of the findings." Unfortunately, the tabulations have not been published nor clearly explained. The variety of reading interests represented by the lists is indicated by the following classes of books included: picture books; collections of children's literature; fairy tales, fables, and fantastic stories; myths and legends; Bible stories; general fiction; poetry; art; music; drama; history; biography; travel; nature; and science and

industry. A supplementary reading list for schools is also presented by grades.

The *Winnetka Graded Book List* (52) is based on very elaborate studies of the books preferred by 36,750 children, of the reading ability and age of each child, and of the judgments of thirteen children's librarians selected by the American Library Association. The published list includes approximately seven hundred titles with annotations. Data are presented in connection with each book which are very helpful to teachers, librarians, or parents in determining whether the book is likely to prove interesting to pupils of a given reading ability and age. Although this list and those by Chamberlain and Carter, Green, and Terman and Lima are open to criticism, they indicate clearly the possibility of selecting lists of books for children on more reliable bases than mere personal opinion.

MODERN TENDENCIES AS REVEALED BY SURVEY RECOMMENDATIONS

Good (20) made an analytical study of the recommendations relating to reading that are found in twenty school surveys. His report shows clearly that emphasis has changed "from oral instruction to silent reading within the past few years." This change has led naturally to wide consideration of the distinction between oral reading and silent reading. Other problems which have been discussed are "the social aspects and values of reading—the enrichment of experience; scientific, testing, and supervisory aspects of reading; and progress through the grades." The later surveys clearly reflect the influence of recent scientific studies of reading problems.

[*To be concluded*]

Educational Writings

REVIEWS AND BOOK NOTES

A systematic treatise on mental tests.—As Professor Freeman points out in the Preface of his recent volume,[1] no previous book has dealt with all the various forms of mental tests. This fact is not surprising even in view of the widespread interest in mental tests and their uses. Indeed, one must admire the courage of an author who, in the face of the theoretical difficulties inherent in the interpretation of the mental-testing movement, attempts to present a comprehensive survey of the entire subject. Such a work needs the thorough knowledge, keen critical insight, and sanity of judgment which the author of this book possesses. If reading the books leaves a final impression of more problems raised than solved, it is because the author refuses to be stampeded into premature and dogmatic solutions.

The desire to give a complete survey of his subject has induced Professor Freeman to present materials which will appeal to two somewhat distinct classes of readers. On the one hand, the book presents the history of the testing movement and detailed descriptions of tests, of the technique of administering them, and of their practical uses. Such material will be of interest chiefly to the more elementary students of the subject. On the other hand, there are discussions of the technique of making tests and a large amount of material dealing with theoretical problems underlying and growing out of the use of tests which can be followed profitably only by those who have a somewhat extended acquaintance with the literature of the subject. Practically one-half of the entire book is devoted to each of these phases of the subject, but the difference in appeal is not made the basis for the organization of the subject matter. Although one might be inclined to criticize the book from this point of view, it may be said in favor of it that those who make use of tests for practical purposes must understand the underlying theory or run the risk of making grave mistakes in interpretation and application.

For the reader who is not already familiar with mental tests, there is an excellent résumé of their history. The author recognizes that the historical approach is of special importance to the proper understanding of mental tests and has presented an account that is adequate for the purpose. The description of

[1] Frank N. Freeman, *Mental Tests: Their History, Principles and Applications.* Boston: Houghton Mifflin Co., 1926. Pp. x+504.

intelligence tests, individual and group, is given in considerable detail. Tests of special capacity, personality tests, and some results of the application of tests to men in the army and to boys and girls in solving such problems as those of delinquency and vocational guidance are included in this part of the treatment of the subject.

The teacher or superintendent will find two parts of the book of special interest. One is that section of the chapter on group point scales which deals with the criteria for the choice of mental tests. The practical school man will find here that, while he may legitimately prefer some group tests to others on account of their lower cost, ease of scoring, or some other of a dozen criteria, with respect to the vital criteria of reliability and validity "most of the composite group tests which are on the market do not differ greatly from one another." The chapter dealing with the educational uses of tests will also be of special interest to those who are directly concerned with school work. By means of intelligence tests, it is possible to secure facts which are of assistance to the principal, the supervisor, or the superintendent in judging the work of the teachers and in dealing with individual pupils. The score on a mental test, however, "is rarely, if ever, to be taken as the sole basis for a decision regarding the pupil" (p. 381).

To the reader who is interested in the more technical aspects of mental tests Professor Freeman presents so many weighty problems that it is difficult to enumerate even the more important in such brief space as is open to the reviewer. In the chapter on the application of the correlation method, Professor Freeman rejects the use of the correction formula for attenuation on the ground that, "from the point of view of individual diagnosis, it is of no use to know that the correlation would be higher if the tests were more accurate" (p. 68). The large variations in the correlations found between intelligence tests and outside criteria make it necessary to base interpretations on the "general trend of correlation coefficients rather than on any single measure." It would be interesting to know which kind of interpretation the author has in mind here. The tests derive their practical usefulness solely from their predictive value, and, from the point of view of individual diagnosis, it should at least cause some uneasiness to base predictions on a general trend of coefficients of correlation, which are themselves general trends.

The chapter which deals with the bearing of mental tests on mental growth brings together practically all the test results that will throw any light on this subject. The evidence seems to the author to show that some narrow and specialized capacities have their own rates and periods of development, culminating at different times but developing at constant rates. General ability also advances at a fairly constant rate, and "mental growth, so far as we can judge from tests, continues through adolescence." The evidence for this last statement is fairly conclusive, but to the reviewer it seems premature to do more than speculate regarding the rate of mental growth and the form of the mental-growth curve until tests have been repeated from year to year on the same children,

and especially until the tests themselves have been refined sufficiently to enable us to approximate at least the relative values of the scores. As the author himself points out, the Binet scale and other intelligence scales are not scales in any such sense as will enable us to solve this problem.

The final chapter of the book, "The Nature of Intelligence," serves to give the author's general position with respect to this difficult problem. He holds with Spearman, as opposed to Thorndike, that there is a common factor in certain performances that may properly be called "general intelligence"; all such performances, however, are in part specific. When the specific factors are predominant, we have capacities which are not closely related to intelligence. Professor Freeman believes that the general factor is due not to a common fund of cortical energy but to facility in the organization of new patterns of cortical elements, the seat of which is probably the association areas. The purely abstract nature of intelligence as an innate characteristic, however, is indicated in the author's conclusion that "mental tests, particularly intelligence tests, measure native capacity in part and education or training in part."

It is difficult in a brief review to do more than scant justice to a book of this sort. It is evidently the result of a large amount of careful and painstaking work. Material has been brought together from many sources and has been organized in such a way as to give us for the first time a fairly complete and systematic treatment of the subject. The style is clear, and the arguments are to the point. Above all, there is evident throughout a studied attempt to weigh the evidence impartially and to treat the subject in a scientific way. The book cannot fail to become the standard book in its field and to keep its place until the advances in mental testing which it predicts make a revision necessary.

E. H. CAMERON

UNIVERSITY OF ILLINOIS

An interpretation of research studies in reading.—The author of *Reading: Its Psychology and Pedagogy*[1] is writing in a field in which he has already attained considerable distinction through research work. The purpose of the book, as stated in the Preface, is to present the results of experimental research and to interpret the pedagogical implications of such work along with their practical applications to the problems of the classroom teacher.

The book lays great emphasis on the different laboratory investigations which have been carried out at the University of Chicago. The work of Courtis, McCall, and others who have attempted analyses of reading ability by means of standardized tests is dealt with in a single chapter on the use of tests in reading.

The contribution of the book is in chapters v, vi, and vii. These chapters deal with specialized types of reading. The first has to do with adjustments in reading in the case of different types of material; the second is concerned with the reading of foreign languages; the third deals with the characteristics of the

[1] John Anthony O'Brien, *Reading: Its Psychology and Pedagogy*. New York: Century Co., 1926. Pp. xxviii+308. $2.00.

reading involved in arithmetic. The results included in these chapters are far-reaching in their outlook and will bear careful study by all teachers of reading. The book would have more value if it had carried these discussions to the point of indicating the probable implications of studies of specialized types of reading for elementary-school teachers.

The chapters on diagnosis and remedial work will be of value to any serious-minded teacher of reading. One of the early chapters makes a comparison of oral and silent reading. While this chapter contains little that is new and while the reviewer can hardly agree with the point of view of the chapter, the material is presented in a way that is both helpful and convincing.

In conclusion, it may be said that the book contains enough new material to justify its preparation. It is written in a way which will make it useful to teachers.

C. T. GRAY

UNIVERSITY OF TEXAS

The results of individual instruction.—Although the current interest in individualizing instruction is widespread and many schemes have been advocated and tried, there has been a dearth of studies of the results of such instruction. The Winnetka experiment in providing for individual differences has attracted a great deal of attention, and now there is available a careful survey[1] of the results obtained in the Winnetka schools.

The method of the survey is unique. Instead of comparing the Winnetka schools with the general average of ordinary schools, the surveyors selected three schools for purposes of comparison, namely, a public school in a town much like Winnetka in size and social status, a private experimental school, and a university laboratory school. All these schools are undoubtedly superior to the ordinary public school, but each is similar to the Winnetka schools in some respects.

The three schools were compared on the basis of (1) age-grade data; (2) results of mental tests; (3) achievement in reading, arithmetic, spelling, and mechanics in English; (4) time spent on group and creative activities; (5) attentiveness of the children in class; and (6) amount of work required of the teachers. In addition to these comparisons, controlled experiments were carried on in the three schools in the teaching of arithmetic and spelling; Winnetka was compared with two neighboring towns with respect to school costs; an analysis was made of the progress of children scoring high, medium, and low on an intelligence test; and a study was made of the high-school records of graduates of the Winnetka elementary schools.

The results of all these studies and comparisons are generally favorable to the Winnetka system. The authors point out, however, that this is a preliminary

[1] Carleton Washburne, Mabel Vogel, and William S. Gray, *A Survey of the Winnetka Public Schools*. Supplementary Educational Monograph, Journal of Educational Research. Bloomington, Illinois: Public School Publishing Co., 1926. Pp. 136.

survey and that, while the results are significant, the principal outcome of the survey is the raising of questions which need further study. Several such questions are stated, and it seems that these unanswered questions constitute the heart of the problem. The following quotation will illustrate their scope.

> Can the so-called "fundamentals" be learned more rapidly and effectively as drill exercises apart from their natural setting?
>
> Do pupils learn when to use facts and do they recognize their social significance as well when the facts are taught in individual self-corrective exercises as when introduced in their natural setting?
>
> Do some pupils learn more effectively under the stimulus of group activities than when working alone? [P. 134]

The account of the techniques used and of the findings is straightforward and adequate. Some will wish that the authors had attempted a more complete interpretation of the findings, but perhaps most readers will prefer to make their own interpretations. A particularly admirable feature is the liberal use of graphs, many of them very ingenious, to make the statistical results easily comprehensible. The treatment of the statistics is simple, clear, and free from technicalities. The book will prove useful to all who are interested in providing for individual differences.

R. C. SCARF

Some outstanding European schools.—Discussions of typical educational procedures in foreign countries have not been lacking in our literature. Newer schools, however, which attempt to depart from the typical, are somewhat less familiar to us. A book[1] devoted solely to these newer schools therefore holds promise of considerable interest to American education.

The intent of the book is clearly presented in the "Introduction for Parents" (pp. vii–xiv). The point of view is stimulation rather than scientific evaluation, and the style is popular rather than technical. The book is intended for laymen as well as for professional workers. Twelve schools are described in brief sketches which "attempt to catch something of the spirit behind the pioneering schools."

As one reads, the schools pass by rapidly, impressionistically: in England, at Oundle an attempt to insert the practical into the typical secondary school, at Streatham Hill an adaptation of the Dalton Plan, at Bedales a coeducational boarding school from kindergarten to college, at London individual and self-instructive work in primary classes of fifty children, at Kearsley the absence of fixed courses and programs; in Belgium a multitude of ingenious devices for individualized and self-corrective instruction; in Holland and in France the development of social ideals despite the heavy hand of central authority; in Switzerland a boarding school where teachers are truly companions of their pupils; in Germany everything traditional thrown overboard in weird and won-

[1] Carleton Washburne, in collaboration with Myron M. Stearns, *New Schools in the Old World*. New York: John Day Co., 1926. Pp. xvi+174. $1.75.

drous fashion; in Czecho-Slovakia, at Krnsko a unique orphan school, at Prague the development of the useful abilities of crippled children. In the concluding chapter the author summarizes seven general trends, all related directly to aspects of the twofold aim of the school—to "mold itself to the needs and interests of the children" (p. 173) and to help children "grow in the consciousness of social unity and interdependence" (p. 174).

The administrator or teacher who seeks suggestions of exact methods to be followed will gain little from this book. The educator who seeks to discover tendencies outside his own domain and who wishes the parents in his community to grow in educational vision will find the book worthy of consideration. Everyone concerned with the development of children will be stimulated by this interesting educational travelogue.

J. L. BLAIR

A descriptive study of adult education.—New Schools for Older Students[1] is one of a series of descriptive studies of adult education. The entire series has been prepared under the auspices of the Carnegie Corporation of New York and is designed to emphasize the significance of the modern movement for a greater range and variety of educational opportunities appropriate for adults. The volume with which we are here concerned is devoted to seven groups of unrelated institutions which are decidedly different in kind but in every case are dedicated either in whole or in part to the cultural and humanistic purpose of helping men and women to a better understanding of the social, political, economic, and material environment in which they find themselves. Belated elementary education, vocational training, and Americanization work are not treated in this book.

In his discussion of each group of institutions, the author follows the plan of describing in some detail several typical cases. The topics which he emphasizes include the nature of the work, the people to whom it appeals, the form of organization and support, the volume of activity, and an estimate of the intellectual quality and the social significance of the enterprise. Because little published material was available, it was found necessary to visit a considerable number of the institutions which are described and to examine their work in person. Both descriptions and conclusions give evidence of considerable insight on the part of the author into the nature of modern American social life.

A clearer understanding of the scope of the book may be gained from the following brief review of the chapters in the main body of the work. In chapter ii several cases of the open forum are described. A considerable proportion of the discussion is concerned with the activities and methods of work that obtain in the Ford Hall Forum of Boston. In chapter iii several institutes, such as the Lowell Institute of Boston, the Brooklyn Institute of Arts and Sciences, and the Peabody Institute of Baltimore, are described. The activities of a number of

[1] Nathaniel Peffer, *New Schools for Older Students*. New York: Macmillan Co., 1926. Pp. 250. $2.50.

individual schools in which more extensive and more systematic work is carried on are set forth in chapter iv. The Peoples Institute of New York, the New School for Social Research, and the Rand School of Social Sciences are selected as examples of institutions of this kind. Chapter v is devoted to the educational activities of certain national associations, such as the General Federation of Women's Clubs, the National Council of Jewish Women, the League of Women Voters, the Masonic Order, the Young Men's Christian Association, and the Young Women's Christian Association.

In chapter vi a brief record is made of the work of the schools of business corporations, such as the American Institute of Banking, the Westinghouse Electric and Manufacturing Company, and the Dennison Manufacturing Company (Framingham, Massachusetts). Chapter vii is concerned with the museums of the arts and sciences, which in the larger cities are extending their facilities to the public by means of lectures, gallery talks, guidance for visitors, publications for the layman, loan collections, etc. In chapter viii a brief history is given of the efforts of working people in England and in the United States to organize under their own auspices educational institutions which are designed to assist them in elevating themselves as a class and to enable them better to understand the present social order and to take a more effective part in remolding it. More detailed attention is given to the Workers Educational Bureau of New York City, which is the national clearing-house of the movement in this country; to Brookwood, a residential labor college near New York City; and to examples of local evening classes in various cities.

The material in this book is especially interesting to all who are professionally concerned with the movement for adult education. Professional educational workers in fields other than adult education will be interested in the emphasis which the author continually places on the necessity of genuine vitality in teaching when the students are adults, who are free to leave if they desire, and when the teacher must compete for the attention of a tired class with the radio, the motion-picture show, the newspapers, and the demands of family and friends. The author emphasizes his belief that a new type of education is being born, which may be expected to exercise a creative and vitalizing influence on the older educational institutions. The superintendent of schools may find in this book practicable suggestions as to types of educational activity which might well be added to the cultural facilities of his community. The book will make profitable reading for laymen and teachers alike who want to keep in touch with the outstanding movements for the improvement of the cultural life of the times.

PAUL W. TERRY

UNIVERSITY OF NORTH CAROLINA

A study of children's interests in reading.—In 1917–18 a series of investigations were made concerning children's interests in reading. The results, which

were published in 1921, were based on a study of books and magazines read by children in eight public libraries in or near New York City and on a questionnaire study among 5,598 pupils in Washington, D.C., and in three cities in Arkansas and Kansas. The pupils were requested in the questionnaire to list in the order of preference (1) the three books which they liked best and (2) the three magazines which they liked best. A revised edition[1] of the 1921 report includes the results of a study made in 1925 among 1,559 high-school pupils in two cities in North Carolina through the use of the same questions which were employed in 1917–18. In comparing the results of the two investigations, the author considered a number of important issues, such as the following: "Do children's interests change very greatly from time to time?" "What effect does living in a different part of the country have upon the choice of books?" With regard to the latter question, the report shows that the similarities are more marked than are the differences. Local influences, however, are responsible for some differences.

Both investigations indicated that boys are partial to books of adventure and to fiction. Naturally, books which were not mentioned in the earlier report are now very popular. Two changes should be pointed out. First, fiction is relatively more popular today than are books of adventure. The author attributes this change, in part at least, "to the greater development and patronage of the moving picture." Second, boys read "magazines relating to science less today than formerly." The "*American Magazine* has caught the boys' fancy and has pulled toward it much of the interest that formerly went elsewhere."

The girls who participated in these studies strongly favored fiction. A slight increase in the choice of adventure and reviews was noted in the later investigations; otherwise, girls avoid information, history, and science. The records showed that girls grow out of juvenile literature somewhat earlier than they formerly did. Fiction, women's arts, and pictorials are very popular so far as the magazine reading of girls is concerned. The *American Magazine* was mentioned so frequently by both boys and girls that it is suggested as a "symbol of high-school interest in magazines."

The author concludes his discussion by attempting to explain the reading preferences of boys and girls in terms of original "satisfiers" and "annoyers." While interesting and suggestive, this section is neither as objective nor as convincing as are the earlier chapters.

WILLIAM S. GRAY

Laboratory textbooks in community civics.—There are many teachers of community civics who desire to use the laboratory method in the conduct of their courses. Until recently there have been few or no aids in the form of laboratory guides to which these teachers could turn. Fortunately, this handicap to good work in community civics is now on the wane. Laboratory manuals in this

[1] Arthur Melville Jordan, *Children's Interests in Reading*. Chapel Hill, North Carolina: University of North Carolina Press, 1926 [revised]. Pp. 104. $1.50.

subject are beginning to appear. A four-book series[1] was published in 1926, and others are on the way.

In the series by J. Wesley Foote the author includes a complete course in community civics based on the activities and interests of the community and its people. Only such information as is necessary to introduce a topic is furnished the pupil. He is expected to place in the manual information gleaned from books, pamphlets, magazines, newspapers, government publications, and personal observations. Throughout the four books an effort is made to emphasize the pupil's connection with the subject as well as his personal responsibility.

As one examines the four books, one is impressed with certain excellent features. Some of them are: (1) emphasis on individual and group activity, (2) excellent selection of main topics and subtopics, (3) opportunity offered, and encouragement given, the pupil to do original and constructive work, (4) suggested application of the work to the pupil's own local community as well as his state, (5) constant emphasis, by means of appropriate questions, on the responsibility of individual citizens to the general well-being of the community. These excellent features are enough to attract teachers who are discontented with the ordinary textbook recitation to the scheme outlined by the author of these manuals. While a teacher may not care to ask each of his pupils to purchase a complete set of the manuals, he will want a set for his own use. By conforming to the spirit rather than to the letter of the manuals, a teacher will be able to inject into his work the main features of the laboratory system and at the same time avoid the pitfalls which are inherent in the method of slavishly adhering to a ready-made scheme.

R. M. TRYON

Teaching middle-grade pupils study habits.—The reviewer has examined three sets of readers covering the fourth, fifth, and sixth grades,[2] which, like all reputable present-day readers for these grades, attempt to inculcate silent-reading skills as essential elements of good study habits. Curious to ascertain definitely what skills are selected for practice, the reviewer attempted to analyze in detail one fourth-grade book, one fifth-grade book, and one sixth-grade book, each from a different set, and to examine the other books more generally. All the editors face in much the same way the perplexing problem of selecting skills and arranging practice. They determine first what skills to devel-

[1] J. Wesley Foote, *Civics of My Community:* Book One, pp. viii+104; Book Two, pp. viii+72; Book Three, pp. viii+88; Book Four, pp. viii+120. Yonkers-on-Hudson, New York: World Book Co., 1926. $0.68 each.

[2] *a*) Ambrose L. Suhrie and Myrtle G. Gee, *Individual Progress Reading.* New York: Hinds, Hayden & Eldredge, 1925.

b) Alberta Walker and Mary R. Parkman, *The Study Readers.* New York: Charles E. Merrill Co., 1924.

c) Bessie Blackstone Coleman, Willis L. Uhl, and James Fleming Hosic, *The Pathway to Reading.* Newark, New Jersey: Silver, Burdett & Co., 1926.

op; then, by directions preceding the selections and by exercises following them, they try to focus the learner's practice in order to develop the skills selected. Moreover, all the editors follow the commonly accepted principle of repetition, as indicated by the following details:

	Number of Repetitions
Fourth-grade instruction and practice:	
1. Choosing specific parts of a selection	26
2. Mastering the meaning of new words	6
3. Forming individual judgments based on the reading	10
4. Grasping and remembering all the ideas	3
5. Asking questions about reading	2
Fifth-grade instruction and practice:	
1. Finding the main thought in a selection	6
2. Finding exact information quickly	3
3. Reading to increase rate	7
4. Testing adequate comprehension	6
5. Selecting key sentences	4
6. Re-reading for a purpose	5
7. Exercises in practical thinking	10
8. Special types of reading; for example, charts	2
9. Suggestions merely to motivate reading	9
Sixth-grade instruction and practice:	
1. Finding the author's main idea	10
2. Careful reading to follow directions	4
3. Picturing the whole and related parts	12
4. Selecting the most significant ideas	4
5. Making comparisons and contrasts	3
6. Intense reading for memorizing	3
7. Practice in increasing rate	4
8. Word study	4
9. Suggestions for motivated reading only	12

It must be understood that the texts do not specifically *name* the reading skills as they are here listed. These lists, probably quite inadequate, are merely the reviewer's generalizations based on his analysis of the activities prescribed by the editors. Moreover, the editors often plan a reading direction to provide practice in more than one of the skills; hence the number of repetitions is considerably larger than specified in the lists. Again, the lists do not represent the consecutive attack of one group of editors; instead they are glimpses into the reading-study analysis of three sets of workers. However, examination of the teaching devices of the other books in the series reveals neither any very definite or logical analysis of silent-reading habits on the part of any one set of editors nor any very progressive series of reading drills as pupils advance from grade to grade.

As a matter of fact, no one has ever made adequate lists of study skills or of the reading skills employed by capable students. Probably no exact classifica-

tion can ever be made; to try to reduce mental acts to a formula is, of course, absurd. The best that can be expected is a statement of general principles derived from the critical examination of the habits of many efficient pupil readers and confirmed by the observations of many co-operating workers in the field of supervised study.

It is time that educators stop their discussion about general terms, such as "divided periods," "concentration," and "assignments," all little more than useless academic generalities, and try, at least, as these present authors have, to determine what study habits really are and to devise appropriate teaching materials and methods. That will insure motivated repetition of the mental activities that are essential in effective study.

Somewhat extended comment on one special phase of the reading instruction in these books precludes elaboration of many other admirable features. They all wisely keep drills for speed and drills for comprehension in close association; in all, narrative prose greatly predominates, interesting and apparently well graded for children; all have numerous suggestions for additional reading by individual pupils. Still further, each set has one or more outstanding contributions not usually found in materials for the grades. To mention a few, *Individual Progress Reading* most admirably directs classroom discussion; *The Study Readers* have many highly attractive exercises in independent thinking; *The Pathway to Reading* makes a special feature of humorous selections.

Verily, our much neglected middle grades are fortunate that intelligent workers are organizing for them such forward-looking and palatable instructional material.

R. L. LYMAN

An illustrated world-history.—The Outline of History by H. G. Wells was first written in 1918–19 and was published in illustrated parts. In 1920 the material was rearranged and printed as a book. In 1923 the material was revised, rearranged, and reprinted in book form. A fourth printing[1] of this material has now appeared. Marked changes have been made, and the general form of the book has been radically modified.

In the present edition the illustrations are the most outstanding feature. The author has selected with great care more than eight hundred pictures, which cover the entire field treated by the book. New sections of the book deal with the development of music and with the history of architecture, pictorial art, and sculpture. The general reader will find these new sections a most interesting and welcome addition.

One change which is notable in the present edition is the elimination of all footnote references. In re-writing the material, Mr. Wells has assumed responsibility for all the statements made and has thus avoided the controversial points which were previously treated in footnotes. This change, which has necessarily

[1] H. G. Wells, *The Outline of History:* Volume I, pp. x+384; Volume II, pp. viii+385–768. New York: Macmillan Co., 1926 [revised and illustrated]. $15.00.

simplified the style of writing, makes the book much more readable for the layman.

The publishers of the present edition deserve great credit for the mechanical excellence of the book. There are twenty-four full-page color plates. The other illustrations are excellent examples of the printers' art, the process of photogravure being used. Practically every page contains one or more illustrations.

The book will make a desirable addition to any school library.

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